	Time	I-dent	S/N	P.S. Type	Analysis of All AGS Cold Snake Power Supplies	Fault ID
Date	1 ime	1-dent	S/N	P.S. Type	Official Hand Off of the Blue Ring to MCR for Run 6, Machine Setup 22:00 G. Ganetis reports	
					that Power Supply work is done for tonight. A successful ramp of the magnets has been	
6-Feb-06	22:00:00	Blue Ring			performed. The RHIC magnets have been left at park.	
11-Feb-06	23:00:00	Yellow Ring			2006-Feb-11 23:00:00 George is done for the night, and has given us the green light. –JLN Yell ring is ready for operation.	bw
		_			The AGS cold snake p.s.'s were ramped down to zero to set the Overvoltage on the helical p.s.	
16-Feb-06	Maint	a20-csnk-sol-ps		Solenoid	to 25V. The AGS cold snake p.s's were ramped back up to operating current.	
					MCR used the Wrong Ramp Rate when ramping down from operating current of 281.663 amps Proper Ramp Rate is 0.25 amps/sec but they had ramped at 0.68 amps/sec causing the unit to tri	,
14-Mar-06	8:47:14	a20-csnk-sol-ps		Solenoid	on Error. No real magnet quench occurred, QdPlots did not register this fault and Cryo did not see any signs of heat rise.	Error / Too fas of Ramp Rate
					06:30 The A20-csnk-ps tripped on an error fault because the proper ramp rate was not followed	
					Don Bruno [ags] [ps] They were all ramped down at 3A/sec at the same time when the A20- csnk-ps tripped on the error fault. The 11, 12 and sol should be ramped down to their desired	
					current first and then the A20-csnk-ps should be ramped down at 0.25A/sec. Then the A20-csnk	ł
					ps must stop at 30A for about 30 sec. If you know you are going to zero then it is faster to ramp down the 11, 12 and sol at 3A/s to zero. Then just put the A20-csnk-ps into STBY without rampi down. It would be nice if we had a program like the SnakeControl application for RHIC that tak	
					down. It would be nice if we had a program like the SnakeControl application for RHIC that tal- care of all of the proper ramp rates and you just type in numbersDon Bruno [ags] [ps] 06:43 I	
					misread the ramp down procedure for the cold snake, causing the power supply to trip on a	Error / Too fas
5-Apr-06	5:27:22	a20-csnk-sol-ps		Solenoid	quench indication. After checking with cryo, they indicate that no temperature rise occured, and the snake is ready for recoveryLH	of Ramp Rate
					Apr-09-2006 07:23 An AGS cold snake quench trip occurred around 07:00, though there was n	ļ
					beam in the Ring (Siemens wasn't even pulsing)jpj, vhs Apr-09-2006 07:40 Don Bruno is investigating from homejpj, vhs Apr-09-2006 07:46 There was a qpa fan fault. I will need to	
					send CAS out with a fan interlock jumper plug and make sure the fans are still running with the	
					plug inDon Bruno [ags] [ps] Apr-09-2006 08:02 Jumper installed, all three qpa fans are spinning. Don is attempting to bring up the solenoid power supply now, with the helical supply	till
9-Apr-06	6:58:12	a20-csnk-sol-ps		Solenoid	at currentjpj, vhs Apr-09-2006 08:08 The solenoid is back at setpoint and MCR has the p.s.'s Don Bruno [ags] [ps]	- QPA Fan Flov Switch Fault
3-Apr-00	0.38.12	azo-csiik-sor-ps		Solenoid	FEC hung up and the Reboot failed (software Issue to be looked into) causing Module A of the	Switch Faun
12-Apr-06	11:37:50	a20-qh-htb		Quench Heater	Quench Heater to fire. This caused the fuse to blow. Engineers swapped out Module A for repair. (Time of call 12:14:00 to end of task 13:30:00)	Quench Heater
12-Apr-00	11.37.30	azo-qu-ino		Quencii rieatei	repair. (Time of can 12.14.00 to end of task 15.50.00)	Quench Heater
					13:50 There was a FEC problem on the A18-qd1 quench detector. The FEC needed to be re-	
					booted. Even through the system was designed to be able to have the FEC re-booted and not cause the quench detector's DSP to trip, I did not want to take a chance and had MCR bring all	
					the currents in the AGS cold snake to zero and then have the FEC re-booted. When the FEC wa	
					re-booted it caused the DSP to hang which in turn fires the quench protection heaters. The energy from the heaters did raise the pressure in the AGS cold snake and therefore the	
					temperature by a small amount. The DSP was reset and the quench detector is now working. In looking at post mortem data I discovered that one of the quench protection heater power supplie	QD /Controls s fec / Quench
					did not work. We had to replace the heater p.s Also I asked the Cryo group to reduce the	Heater Blown
12-Apr-06	11:37:50	cfe-a18-qd1		Quench Detector		125 amp Fuse
					09:56 The quench was caused by a reset of the a18-qd1 quench detector FEC. A reset of RHIC quench detector FECs was coordinated with MCR and with George Ganetis. a18-qd1 was to be	
12 1 05	9:41:17	AGS Cold Snk		All	specifically excluded from this reset. It was a mistake on my part that the reset was not carried	QD /Controls fec
13-Apr-06				All	out as plannedjtm Node Card not responding properly, Team found UPS appeared to be overloaded and by cycling	Node Card /
19-Apr-06	Maint	Node Card			the power to the unit, communications was reestablished.	UPS
					Operating at 2.27amps, this was not a real quench as no heat was generated due to low current and Qdplots did not register the event. Unexplained as to why the supply tripped, possible 3U	
20-Apr-06	12:51:30	a20-csnk-ps		Helicle	bucket or the Under Voltage Circuit is malfunctioning.	Off
					Snapshot indicates that the Supply tripped on an Error Signal. Last command sent was an ON	
					command. Iref started out at 0.39amps, current indication was 1.12amps and when the ramp up was given, Iref followed but current never moved causing the Error Signal to trip the supply. N	ot
24-Apr-06	13:31:28	a20-csnk-sol-ps		Solenoid	sure if the supply was really on. G. Heppner	Error Signal
					Instead of using the Auto System to ramp down, MCR ramped the supply manually, using the wrong ramp factor. (Ramped down at 2.81 amps / second rather then the recommended 0.25	Error / Too fas
15-May-06	2:08:56	a20-csnk-ps		Helicle	amps/ second) Did not affect RHIC Operations.	of Ramp Rate
					12:23 A20-csnk-ps tripped to the OFF state. The problem may be in the 3u control chassis (one possible place) so I asked MCR if I should swap it out (about 45 min) or they could recover the	
					p.s., then the next time it trips to the OFF state we could swap out the bucket or I could have the bucket ready and CAS could do it later. MCR chose to recover the p.sDon Bruno [ags] [ps]	
24-May-06	12:02:38	a20-csnk-ps		Helicle	12:47 All of the AGS cold snake ps's are at operating currentDon Bruno [ags] [ps]	Off
					Operating at 237.84 amps, the supply tripped to the Off State. Unexplained as to why the supply tripped, possible 3U bucket or the Under Voltage Circuit is malfunctioning. CAS was ready to	1
26-May-06	20:53:20	a20-csnk-ps		Helicle	swap out the 3U bucket nut MCR elected to retry.	Off
26-May-06	21:26:34	a20-csnk-sol-ps		Solenoid	Snapshot indicates that the Supply tripped on an Error Signal. Last command sent was an ON command. Current did not follow the Iref. G. Heppner	Error Signal
					Operating at 237.84 amps, the supply tripped to the Off State. Unexplained as to why the supply tripped, possible 3U bucket or the Under Voltage Circuit is malfunctioning. CAS was ready to	
28-May-06 29-May-06	8:09:06 8:55:42	a20-csnk-ps a20-csnk-sol-ps		Helicle Solenoid	swap out the 3U bucket nut MCR elected to retry. Power Dip	Off
					Snapshot indicates that the Supply tripped on an Error Signal. Last command sent was an ON	Power Dip
29-May-06	9:48:20	a20-csnk-sol-ps		Solenoid	command. Current did not follow the Iref. G. Heppner Operating at 237.84 amps, the supply tripped to the Off State. Unexplained as to why the supply	Error Signal
20.16					tripped, possible 3U bucket or the Under Voltage Circuit is malfunctioning. CAS was ready to]
29-May-06	16:35:34	a20-csnk-ps		Helicle	swap out the 3U bucket nut MCR elected to retry. Snapshot indicates that the Supply tripped on an Error Signal. Last command sent was an ON	Off
29-May-06	17:21:5	8 a20-csnk-sol-ps		Solenoid	command. Current did not follow the Iref. G. Heppner	Error Signal QPA Fan Flov
31-May-06	Maint	a20-csnk-sol-ps		Solenoid	Replaced qpa fan switches on A20-csnk-sol-qp J. Wilke	Switch Fault
					Inspected the 3U Chassis inner connections, By-passed the Under Voltage Circuit, checked the Line AC connections from the AC Power Chassis above in the same rack, checked the Node	
31-May-06	Maint	a20-csnk-ps		Helicle	Card Cable st both ends. Tested Spare current regulator card for A20-csnk-sol-ps up to 10 amp	Off
31-May-06	Maint	a20-csnk-ps		nencie	G. Heppner	I OII

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Date	Time	I-dent	S/N	Loc.	SQ Ref:	Analysis of Snake / Spin Rotators	Fault ID
6-Feb-06	22:00:00	Blue Ring				Official Hand Off of the Blue Ring to MCR for Run 6, Machine Setup 22:00 G. Ganetis reports that Power Supply work is done for tonight. A successful ramp of the magnets has been performed. The RHIC magnets have been left at park.	
11-Feb-06	23:00:00	Yellow Ring				2006-Feb-11 23:00:00 George is done for the night, and has given us the green light. –JLN Yellow ring is ready for operation.	
23-Feb-06	14:03:48	bi5-rot3-2.3		5C	MSQ-003	Snapshot indicated that the Iref was scrathy while MCR was ramping up which in turn the curren followed suite. While testing for relays, we checked the LOW RES card signals and they appeared lower then usual. Will be replaced during the next maintenance day, March 1, 2006. The 5b-qd1 Quench Detector tripped the supply due to an eratic signal. TECH REPORT Logged in at15:47: The current regulator card was swapped out for bi5-rot3-2.3 because of bad relays on the boardDon Bruno [rhic] [ps]	
						Replaced the LOW RES card and took new data. Numbers appear a whole lot better so returned	
1-Mar-06	Maint	bi5-rot3-2.3		5C		original Low Res Card s/n 154 back to Controls Group. GPH	Low Res Card
10-May-06	Maint	yo5-rot3-1.2		5C		Replaced a Fan fail on Y5-rot3-12 (2nd back from DX Magnet). MD and GPH	Fan Fail
18-May-06	19:21:52	yo5-rot3-2.3		5C		Gregg, Just to keep you up to date, I think there was a power dip today at the time this rotator tripped. I know there was a power dip so I am guessing that is why this rotator tripped. Don	Power Dip
29-May-06	8:55:00	yo8-rot3-1.4 yo8- rot3-2.3		9A	Power Dip Recovery PR 046	2006-May-29 08:55:00 Physics is off, a fairly severe power dip appears to have occurred. The Linac is completely down, the Booster and AGS main magnets have tripped off. Both RHIC ring have quenched, along with several RHIC snakes and Rotator. We are receiving pump room alarm for the Oppis cooling system, the Booster main magnet power supply and the PHENIX cooling tower. 2006-May-29 11:15:00 J. Drozd is coming in to reset a node card in alcove 9a. (Affects Yellow Rotator Magnets yo8-rot3-1.4 & yo8-rot3-2.3)	
15-Jun-06	16:21:00	bi9-snk7-2.3		9 A	Alarm Log	For the longest time, this supply was indicating a "WfgRefRangeError" a difference of approx 2.24 amps between the wfg and the Current. Time permitted, access allowed:17:40 D. Bruno reports that the errors for bi9-snk7-2.3-ps are being caused by current regulator card. He will replace the card at the next opportunityLH 17:48 The wfg output = 323.009. The low res card output = 323.4A. The Setpoint card at the p.s.=323.4A. The setpoint at the current regulator card = 320.4A. This is where the problem is. The current readback from the buffer card to the MADC's is 321A. The pet page setpoint MADC readback is 321.49A, the pet page MADC current readback is 321.31A. The current regulator card should be repalced when there is timeDon Bruno [rhic] [ps]	
10 3411 00	10.21.00	017 SHR, 2.3		711			
16-Jun-06	9:05:00	bi9-snk7-2.3		9A	Ref to 15- June-06	Tech Team Rich Conte and Mitch DeLaVernge replaced the Current Regulator Card and tested to Operational Current through MCR.	Current Reg Card

Date	Time	I-dent	S/N	Loc.	QLI Ref:	Analysis of Bruker - Sextupoles	Fault ID
						Official Hand Off of the Blue Ring to MCR for Run 6, Machine Setup 22:00 G. Ganetis reports that Power Supply work is done for tonight. A successful ramp of the magnets has been performed. The RHIC magnets have been left at park.	
6-Feb-06	22:00:00	Blue Ring					
						2006-Feb-11 23:00:00 George is done for the night, and has given us the green light. –JLN	
11-Feb-06	23:00:00	Yellow Ring				Yellow ring is ready for operation.	

Date	Time	I-dent	Loc.	QLI Ref:	Analysis of 6000 Amp Quench Switches 1010A	Fault ID
					Official Hand Off of the Blue Ring to MCR for Run 6, Machine Setup 22:00 G. Ganetis	
					reports that Power Supply work is done for tonight. A successful ramp of the magnets has	
					been performed. The RHIC magnets have been left at park.	
6-Feb-06	22:00:00	Blue Ring				
					2006-Feb-11 23:00:00 George is done for the night, and has given us the green light. –JLN	
11-Feb-06	23:00:00	Yellow Ring			Yellow ring is ready for operation.	
					07:14 Air flow fault on one of the 6000A quench switches in 1010A. I spoke with Tim	
					Costanzo and Joe DeCicco of CAS. They will put a jumper plug in and make sure the fans	
					are still spinning after MCR brings the yellow link back up. If one of the fans are not	
					spinning I need to be contacted again and we will have to replace the broken fanDon Brune	
					[rhic] [ps] Y9DQPSW - status: Air Flow Fault. Day Crew invetigated and found all 3 filters	
		Y9DQPSW			clogged especially the lower filter (closest to the building entry door) and also found	
24-May-06	6:24:08	Y10DQPSW	10A	PR-044	Y10DQPSW filters partially clogged. Replaced all 6. MD and GH.	Fan
		Y9DQPSW				
31-May-06	Maint	Y10DQPSW	10A	PR-044	Y9DQPSW and Y10DQPSW quench switches Fan switches (6 per unit) replaced	
					2006-Jun-23 23:32:00 W. Louie has been contacted to investigate a UPS fault indication for	
					the Y9DQPSW quench protection switch that was received when the RHIC power supplies	
					were shut off for the storm.	
23-Jun-06	23:32:00	Y9DQPSW	10A	MCR	2006-Jun-24 00:30:00 The alarm eventually cleared, and Wing did not find any problems.	UPS Fault

RHIC Physics Run 6 AGS Cold Snake Power Supplies

Date	Time	I-dent	Loc.	QLI Ref:	Analysis of Quench Detectors Official Hand Off of the Blue Ring to MCR for Run 6, Machine Setup 22:00 G. Ganetis	Fault ID
6-Feb-06	22:00:00	Blue Ring			Official Hand Off of the Blue Ring to MCR for Run 6, Machine Setup 22:50 G. Ganetis reports that Power Supply work is done for tonight. A successful ramp of the magnets has been performed. The RHIC magnets have been left at park.	
11-Feb-06	23:00:00	Yellow Ring			2006-Feb-11 23:00:00 George is done for the night, and has given us the green light. –JLN Yellow ring is ready for operation.	
					2006-Feb-20 12:01:00 cfe-10a-qd2 reports a no heartheat fault on the alarm display. 2006- Feb-20 12:06:00 While trying to reset the FEC 10a-dq2 fit request that Quench Detection personnel be contacted first. 2006-Feb-20 12:22:00 resetting cfe-10a-qd2 after consulting with G. Carecis. 2006-Feb-20 12:25:00 The Yellow Quench link was pulled as a result of	
20-Feb-06	12:19:43	cfe-10a-qd2		MS-010	resetting the Quench Detection FEC.	Quench Detector / Controls FEC
					2006-Fig. 21, 23, 41, 2010. Classes it salls to report a problem with the quereds protection for the market in the 2°C closes. It will require a beart of diseases on draps the problem for home. This work will include charge the studie converse, preventing so florar injecting into RIIIC. 01011 hove from all problem with channel assignments in the 3-cyll queen, deceiver. The initial testing thould have found this but it did not. The problem was corrected and now all the signals are correct, classes.	
				G	home. This work will include change the snake currents, preventing us from injecting into RHIC. 01:01 I have found a problem with channel assignments in the 3c-qd1 quench	Software Channel
21-Feb-06	23:41:00	3c-qd1	3C	George Noticed		Assignments
					2006-Mar-22 17.56.00 Communications have been lost with cfo-7c.qdl. 2006-Mar-22 18.65.00 APEX is off. We unexessively namped the RHC magnets to zero before receiving the PEC. Only pointers are on the 7c.qdl. not permit would also byte ofton white his effect of the permit would also byte ofton white his effective were tripped on a sparsch that to the quench detector PEC rebox. Mar-2-2-2006 14/2-3 The Yours Virginis for these magnets where at like Current (too final starp) almosfrare the magnets did not quench. All four (4) Rotators had tripped due to the cfo-7c.qdl. others are APEC. A likepoor (bell) [content had tripped due to the cfo-7c.qdl.	
					the FEC. Only rotators are on the 7c-qd1, so the permit would only been down while the rotators were tripped on a quench due to the quench detector FEC reboot. Mar-23-2006 14/23 The Bourne Standing for these mounts when a billin Comment (dues then Loren).	
22-Mar-06	18:10:57	cfe-7c-qd1	7C	PSQ-001	therefore the magnets did not quench. All four (4) Rotators had tripped due to the cfe-7c-qd1 reboot as per MCRG. Heppner [rhic] [quench]	Quench Detector / Controls FEC
					There was a souse gas consequent votage tap wire on rev-sus2.5 that caused this snace magnet to queech at 14-54. Dun Odham went into investigate, along with Wing Louic and Gregg Heppner, and Dun found the loose wire. It was repaired and he checked all the other	
					wires while we were down thereDon Bruno [blue] [quench] Detailed Info: TB2-3, positive lead Voltage Tap Wire BI9SNK7B3_GL located at the Quench Detector in Alcove 9C, Din Rail Patch Panel was not recognly secured. The Screw terminal was found fally tightened	
					There was a lower generable fast of voltage up witer in Mr and 2.2 the caused his makes against to again to 1 4.2 the Mr and Mr and was a mercipate, design of Mr Mr and and Gorge Bergers, and Dan found the lower wire. It was required and the checked afthe other wires while we were done then. Dan Brann Brand [pennels] Destable Brand Than 2.5, anxiety lead Voltage Tay West BrOSN/TRI (2.1) knowed as the Quench Destavoir and Assow W. E. Brand Mr and	Gas Cooled Lead BI9SNK7B3_GL
22-Mar-06	14:54:53	9c-qd1	9C			Faulty Wire Tap
					16:35 We had to reduce a front end, clo-58-qd1, due to a response failure inflication that eccurred during the physics such. This caused the querch links to strop in the mentione, during the access into BHIC, two such as uffered a real querch be ² 94-72-3 and 1.4 The flash was caused by a faulty voltage up for a pse-cooled read to the snakes, and has caused deveated temperatures acoust for tray. We wond columner for most polyter proceeding with eccurrency—1.1 Blue Recovery Completed at 165-111 and Yellow Recovery Completed at 179:000. Scattpool designeds in 50 required bearings in one Cupters Decease Decease (See 17).	
					fault was caused by a faulty voltage tap for a gas-cooled lead to the snakes, and has caused elevated temperatures around the ring. We await clearance from Cryo before proceeding with	
23-Mar-06	15:18:20	cfe-5b-qd1	5B	PR-005	recoveryL.H. Blue Recovery Completed at 16:51:11 and Yellow Recovery Completed at 17:03:00. Sextupole Magnest in 5B required Re-training since the Quench Detector 5b-qd1 was reset and was done by MCR Personel - G. Heppmer	Quench Detector / Controls FEC
					2005-Mar-24 1E 7 100 Front end Bo-qd2 Aboves a response failure. En indicates that a reboot of the formes deal response. We come for a transitionar. We have conforme that the conformed transitionary is a resemple for L. Indiv. Under response that we constant I Goodball as senses of the contract Act and the above does never that the first former and Bo-qd2. Weign angiented that the twinser of aments Act and the contract Act and the above does not constant I found that the contract that the cont	
					leave a message for L. Hoff. W. Louie requests that we contact J. Gould to assess the network traffic for front-end 80-qd2. Wing suggested that that the volume of network traffic at the front end may account for its failure and the failure of 50-qd1 yesterday. We are	
21 May 06	10.02.52	of the	ep.	PP 006	preparing to reboot the 88-qd2 FEC. We must ramp the magnets in RHIC to zero current. Rebooting cfc-88-qd2 2006-Mar-24 19:34-44 Quench link for yellow is recovered. We begin humanic man 2006 Mar 24 10:4600 Mentanging to provide companies of the provided of the provide	Quench Detector / Controls FEC
24-MIE-05	1930232	cie-sp-quz	- 0.0	PR-005	ayseersts range. 2005-state-24 124-0500 reporters range is comparie. 23:45 Quench Link Interlock in Yellow ring First input decembed was 124-061 A (23:45-00 1681663.)	Controls Pex.
25-Mar-06	23:45:00		12A		22:45 Quench Link Interlock in Yellow ring First input deopped was 12-pail A (23:45:00 1881663) First appratum carrier dup was 40-mine A (23:45:00 1881664) - Sequencer 23:45 Bean Abort, 12-pail A deopped Yellow Quench - Sequencer 23:49 This quench is integrand Mexame we had to reboot of 12-ba-gil NAK	Quench Detector / Controls FEC
		cfe-12a-qd2 cfe-9b-qd1	9B	DD 000	Redistrion Effects to the 6h add country datastes	Other (Rad)
					For the b-1-146-ps strip, Ophios time and date are incorrect for this event. [4022-0405206_22057_02.A. dateBise date 2 Quended [SignalB TQ6, VT Int [4002-0405206_22057]. A. dateBise date 2 Quended [SignalB TQ6, VT Int [100-0405206_22057] [inkthode: CUCUI]] via michardo when the actual date was 04/07/2006 and the Time of the Event was 15/1557. George Guntris was notified and looked into the issue. The Polic for the wown Date and Time are the ones to in-	
7-Ape-06	15:15:57	2b-qd1 Aux	2В	PS Fail	04/07/2006 and the Time of the Event was 15:15-57. George Ganetis was notified and looked into the issue. The Plots for the wrong Date and Time are the ones to use.	Wrong Time and Date Transfer
					Sequence of Finests: 2006-Amr.08 22:28:53 Crun control remots that they have lost	
					communication with lead flows in the 6 o'clock sector. They request that the capClient server be restarted. 2006-Apr-08 22:40:00 Cryo reports that they are continuing to have communications difficulties. The problem is related to the response failure indication from	
					cfe-68-qd2. The front-end will require a reboot in order to restore communication. We leave a message for L. Hoff and then call G. Ganetis for assistance. 2006-Apr-08 23:10:48 G. Ganetis has called the cryo control room and determined that the refrigerator system is stable	
					cuaters nas cauce the cryo-control room and electromate that the reorigenator system is stanse and will tolerate continued operation in this state until the front-end 6b-qd2 can be reset. We will reset the computer at the end of the present store. 2006-Apr-09 01:00:00 RHIC physics- ends. 2006-Apr-09 01:28:24 Beam is aborted in RHIC due to a slow loss radiation monitor	
					ends. 2006-Appe-09 01:28:24 Beam is absorted in RHIC due to a slow loss radiation monitor interlock from g9-lmS. The interlock occurred after we had manually aborted beam in the yellow ring in preparation for measuring the emittance in blue. We ramp down to park to	Quench Detector /
9-Apr-06	1:32:24	cfe-6b-qd2	6B	PR-020	reboot cfe-6b-qd2. 2006-Apr-09 01:33:16 After ramping down to park in RHIC, we reboot cf	Controls FEC
					2006-Apr-12 23:23:58 Summary: Accelerator Beam Experiments ran for 7.5 hours this shift. Afterwards cfc-9b-qd1 was reset which brought down both the Yellow & Blae quench links. Once the quench links were recovered, the sestupoles associated with the 9b alove had to the retrained. As of the end of shift RHIC has been put through a hysteresis cycle and is being present for a 11111 and bareh nature fill.	Ouench Detector /
12-Apr-06	21:41:47	cfe-9b-qd1	9B	PR-026		Controls FEC
12-Apr-06	23:28:44	cfe-6b-qd2	6B	PR-027	2006-Apr-12 23:30:00 6b-qd2 is now dead. MCR consulted G Ganetis per fit reset instructions; he advises us to go ahead with the reset. Ramping to zero. 2006-Apr-12 23:54:00 Quench links are back up. Hysteresis ramp.	Quench Detector / Controls FEC
					Communications Failure of the cfe-1b-qdl Quench detector required a Re-boot. It was descided to Re-boot all cfe Quench Detector front ends this time since there has been multiple communications faults with the cfe-qd's including 4 within the last 24 hours. This	
13-Apr-06	9:38:40	cfe-1b-qd1	IB.	PR-028 / 029		Quench Detector / Controls FEC
					2006. Agr-16 13:56:49 Cryo reports that they have lost communication with the 10 o'clock sector. After inspection, we find that cfe-104-q20 indicates a no hearthest condition. After leaving messages for 1. Hoff and V. Louie as well as conferring with G. Ganetic, we reboot the FEC, restoring cryo communication with the sector.	Quench Detector / Controls FEC
16-Apr-06	13:56:49	cfe-10a-qd2	10A	CRYO	the FEC, restoring cryo communication with the sector. Apr-18-2006 22:09 All 25 quench detector FECs were moved to a new subnet (.84). Every	Controls FEC
					the U.S. control, cycle (Samulacutes of the Carlos Carlos) are short (4.1). First, primarily control for data sensition for the sensition for the carlos (4.1). First, primarily distinctive season under facilities were read and quantum conveys upon the sensities were read and quantum conveys upon the sensities of QO and the Carlos (4.1). The Carlos (4.1) are short (4.1) and the carlos (4.1) are the carlos	Preventative
18-Apr-06	Maint	All cfe -qd's	All	Maint	used when the rings become operationalGanetis [other] [quench] Alarm Page indicated at 07:44:28. No HeartBeat, response failure - acufec 303.pbn.bnl.gov.	Comm. Loss
					Number the proper personnel. Our 11:25 Into Stude Unit Quality was one to a reservor the cir- 10a-qd1 (Item Number 3 of the Automated Analysis). Observation: Both rings had been ramped to zero current and all 4 DX Heaters in 1010A had been fired while the DX Magnet	Quench Detector /
25-Apr-06	10:23:06	cfe-10a-qd1	10A	PR-032	was at low currentG. Heppmer [thic] [quench] The 9u-qd1 quench detector tripped because of a handware problem with the temp.	Controls FEC Temp Compensation
2-May-06	4:15:25	cfe-9a-qdl	9A	PSQ-016	The 9a-qd1 quench detector tripped because of a hardware problem with the temp. compensation channel. I have turned the temp, compensation off in this quench detector for now. Granetic [quench]. Access required to make repair. Example Directle [36] Col. 11 (2014). Girk MAY Cold but is responsible for the Temperature.	Channel
				MCR / Ref to	Found Channel (California of a Channel California of a Channel California of a Channel California of a Channel California of Channel California of Channel Channel Channel of the Channel	Temp Compensation
3-May-06	9:15:00	cfe-9a-qdl	9A.	PSQ-016	Louie, G. Heppner 06:38 The blue link trip cause looks like an intermittent cable connection between the 1b-qd1 quench detector and the permit module. This should be checked soon. This quench detector is located in the 1B alcoveGanetis [blue] [quench]	Channel
1-Jun-06	4:27:43	cfe-1b-qd1	IB			Other (Cable)
					Ref to PR-048, Turnel access was granted when PR-049 (b-gtrim Toldo Box Failed). Cleaned and inspected K-lock Connections at Cables, Quench Detector and the Permit	
					Ref to FP. Ost. Turnel scores was granted when PR. Del Despire Tolds Bes Table). Cleaned and inspected K-Oste Connections at Calles, Quested Debecter and the Permit Module Chassis. Tap test and Wiggle Wire Test all areas that meight have affect, could not get another fault. Measured Permit Chabe, both indicated Open and then containing a state fault. Measured Permit Chabe, both indicated Open and then containing a contained fault. The London Signals to the Permit Module failed during Analysis and contained that the Park Olivers Measured Wing London Description.	
1-Jun-06	9:56:10	cfe-1b-qd1	IB.	PR-050	1 nen, tre: Output Signuss to the Perintl Module Italed during Analysis and required that the 15-qd1 Quench Detector be Restarted. Wing Losie & Gregg Heppner	QD Restart
					10:28 Tom Nolan, Jeff Wilke and Gregg Heppner are swapping out the UPS for the quench detector in 1002B. They will contact Wing Louie when they are done. Wing will get teh quench detectors going and then contact MCRDon Bruno [rhie] [ps]	
		.r. m . c			11:25 The Blue and Yellow Link tripped due to a UPS Fail causing a loss in power to the Queech Detection Ruck is Building 2B. This loss of power also caused all 4 Dx Magnet Heaters to FireG. Heppner [rhic] [quench]	
13-Jun-06	8:44:34	cfe-2b-qd2	2B	PR-059	Heaters to FireG. Heppner [rhic] [quench]	UPS Fail

ns Sovenshel and Compiled by Grupony 7. Reppons

RHIC Physics Run 6

AGS Cold Snake Power Supplies

Date	Type of:	wx	Maintenance Work Performed during Physics Run fy05
Date	-ype of:	",	манисивих чов геновие чинд гнумх кин 1902
16-Feb	Maint	Sunny	17-28: 1) The following ice hall tree heaters were investigated, all were found to be operational, no repairs needed: a, Ykq7, b, YlQq7, c, YlQq6,
21-Feb	Maint	Sunny	16.54 1) The following ice hall tree heaters were investigated, all were found to be operational, no repairs needed: a Y8-q7, b Y8-q8, 2). All of the RHIC stades were ramped down to zero and part into othy for de magnet training. All of the RHIC stades are back ON and have been ramped hock up to operating current. PLEASE DOUBLE CHECK THE RESTORNING STOR HERICH SCAMESS. 3) The neutron p X-s are all or all any 4 Howeverlage yield-operating current. PLEASE DOUBLE CHECK THE RESTORNING STOR HERICH SCAMESS. 3) The neutron p X-s are all or all any 4 Howeverlage yield-operated proportions of the proposed portion of the proposed po
28-Feb	Maint	Sunny	25:07. We handed the RHIC ps.* back to MCR after this ramp at 19:50. 1) Swapped current regulator card, firing card and buffer card for yob-qdTps. 2) Replaced JFD connector and In-classis backplane of yob-qdTps. 3) Swapped our current regulator cards of yol-qdTps and Mo-qdPps. 3) Replaced gate after writer to one SCR in No. 47:ps. 3) Replaced but qual tas revisibles in 4 agris in 20 and 4 qui in 40. 6) Replaced one qui in 4th became of but fair designs of ps. 40-dps. 3 (in Chestel Lealing carrier of sector for pince time beares. 11 Replaced does card and bed in 16-dps. 12. 2) Added fairs to magnet trees 189(1, 180(3, 189(3, 180(3, 191(1, V2Q), V2Q), V3Q(1, V3Q), 13) Replaced bad ice bull temperature sensor V10-17TBDon Bruno (fri most processed in the sector of the sec
15-Mar	Maint	Party Cloudy	1644. 1) Swapped 3 channel isolation amplifier board of 1970 qff and 3/10 qff. 2. Required connector on 8CR gase of 1/3 qff. Checked gase drive empress of 8cd quant days and locked good. 3) the Dx magner was trained 4FDIX, see George's comment at 1620. 4) Swapped out quy than invitables for yorl2 qff., yorl2 qff, and 1/3 qff. The original switches were left in first 8cd, 7D, eng fin interface, jumper plays were removed for these four. Adult 4 jumper plays 10 ks 4/5 qff. The original switches were left in first 8cd, 7D, eng fin interface, jumper plays were removed for these fourser circuit between properly in screek 2 and 3. 6) Tested new version of TAPE but it is not ready yet. 7 Checked wring of ground final circuit in worm dipole ps. in 10A and a fine fice voltage readings. 8) World end of fifty of yorg gapen and/ling ps. 99 World end next it voltage monitoring. This will continue mental final final source and the properly in the source should be when the properly in the source of the device these registions are convert. 11W as also becomes thought device has been been extraored on the convert.
15-31			19-49 I par y3-412 into the OFF state to bring down the yellow link. This is in preparation for a Dr. magnet training queech. We don't want to ramp yellow. Don Blumo [his] [ps] 11-93-4th DX magnet training queech was located all BHDX with a current of 6120 Amps. Checked all quench detector signals and there are no problem with this jich current queech. The blue are diploct areas was 4816 Amps. Tespolom rigus was no proceed during this queech.
17-Mar	Maint	Sunny	Ganetis [blue] [quench] Data Store performed for low current test on yo5-xxf-ps from 0.01amps to 0.30amps for possible low energy run. G. Heppner
			18.55 BHLP, 9a Maintenance for 327800 1) Installed more voltage monitoring in sector 1.2 Replaced gate drive bound of yol 24g-18p. 3 Roset mode card area for of allow 9c Maphased 18rd in Companion bound. 5) Roset better and the collection to be a read and two to prospin manually. Please check that the stakes are at the correct septions. (a) Yill 04g-1p has a problem with a filter for the wife mathies that counts will fit to mornow. 7) Sestingele polarities were check on yol equit, 0, yel-equit, 0, yel-equit, 0, bed-equit, 0, yel-equit, 0, yel
28-Mar	Maint	Sunny	were connected. The rest will be connected on the next maintenance day. 9) A dx magnet was trained. See George's comment at 12:21. 10) Performed one hysteresis ramp. Don Bruno [thic] [ps]
4-Apr	Un- Maint	Mixed	17.19 BHC PS Work performed on 44/06.1 melocholade Maintenance due to Substation Fall, Ref to PR 018; 1) Swapped out y 12-q80-ps. 2) Swapped to be extraped magnet leasts on yoi-ego?, 3) Swapped con bad up and no winches for y3-is-qi and boi-grd and removed their que far interfacts, jumper plags. Voltage to this plags are no measure also with one swortders. 4) Intained age far jumper interfacts plag for 61/2-disting-yadage on plags = 18 will before yadage on plags = 18 will be for 18 years. 4 will be provided on the provided of the provided of the provided of the years of years of the years of the years of year
19-Apr	Maint	Sunny	Apr. 19-2006 (6.48 BRIC PS Wark performed on 4/190c 1) Checked all qus fan play voltage. 2) Swapped on buffer out for bi-led pad now the voltage realback on pull looks correct. Im did not find anything wrong with the buffer card. 3) Asided yi10-dhi, yo-4/22 and bi-4-pc quar far plays. 4) Re- installed original (Queech hearer that was removed for AGS cold states. 5 BRIC made ps) are in STBY. 6) Performed a hysteries ramp win pg/St. 7) All BRIC ps. 5: All at Injection. 8) George will be doing dx magnet training this evening. The control system abould not be disturbed unless you check with George friet. Ano Buttom (bit. [pl])
3-May	Exper Access Maint	Cloudy / Rain Rain	May 3, 2006, 12-23, BHIC PS Work performed on 5:306: 1) Swapped out current regulator card for bol 1-qdl because of a bad relay, 2: Fixed problem with Pasql.1 Swapped out a card. 3) Found Jones as connections on syst-17. They were lightened. This could have been the reason for the off inty on 5:206. by John for final may look connections on syst-17 pear but they now syndered or thescane one condige final was broken. This you was being checked because it tripped off on 5:106. 5) Fixed new amaginets review with Jonathan Laster be in did not work to see will try again on the enter minimenance day. On framed one was might pear in 10:104 to make are it was operational and in was. 3) We were called in handing the yet in some two the CNP because of a 10 first one was might pear in 10:104 to make are it was operational and was. 3) We were called in handing the yet in which were to MCN because of a 10 first one was minimenance performed on 5:1006. 1) Swapped on this deadle, 2s. 2) Fixed one wise temp unitary 17th 3. Introductable of the waster to the triple first triple town forting was found. We will probably local with some more one text minimenance day. We may 9, ARX/ON and VARX/ON and they looked 6:4. 9) Regrinced order mapper cover fan. 5) Did self check of quent desceited USPs. 6) Regulaced QPA fan switches in 5 QPA's. 7) Connected the one wire temp menons in 170 11/20. 3) DVA 330 all and 10 to 6 does. 8) Regulaced 11/2-4ps. 9) Installated beautish so III Christon which is 15 QPA's. 7) A part Andre 17 Jonesters into performed to 10 final through the first of the size were placed promise or 10 first one to the call. 8) Regulaced 11/2-4ps. 9) Installated beautishes in 16 Christon of the 10 first of the two sets of the 10 first of the
31-May	Maint	Overcast / Warm	21.51 BHIC ps. Maintenance Performed on Wed May 31st: 1) 1010A 6000A quench switches Fan withir replacement. Two Quench switches had 6 switches in each quench switch. 2 Beplaced VQ2 Thermostat and heater. 3) installed one wire temp sensor on SDI XDI 3.61 Replaced gap fan switches and 20 Castle older pd. Sensored ADS castle, by a Castle ordinary desired understraining and educated all connections. Castled note can calculate connections in mode card and at 8 is counted chansal, under a distillated to trading loose was found. The set connections to the 3s connections in mode card and at 8 is counted chansal. Castled connections and inglement by the ordinary loose was found. The set connections to the 3s connection to the 3s connections to th
31-May	Maint	Overcast / Warm	In Tends (Ramp pp.33 (IGEAV). This seemed to work fine how we did a data store of the p.a., currents with the quench detective which we will have to look at because the GBT was ready and again explores with the geVP trange, how parties part and result and must be replaced. Bill diding speed to be looked at because the GBT was not sharing current equally. We cannot map gPV until those 2 problems are fixed. We estimate that we need 8.1 22 hours to fix the 2 problems where we need the line crow to look our circuit beneaths for the main p. x. is, the substance of 100M. We are not allowed not brown the disconnect switches in 100M for the main p. x. is. We also need time to measure the current in the 2 IGBT's of 80 did-qui in order to fix the problems. 12) We were delayed in finishing our testing because of what we believed to be ready problems to the quarted detectors. 13) Second endectors. 13 for some disconnect sharp of the problems of 100M. We referred the such as and forances. 144 IRs in the sexappele p.5 x at 10% so the quarted detector could store the resistance of the DC cabbes, 15 MCR Performed Hysteresis ramp with pp.55. Som fittoon [left].
8-Jun	Maint	Cloudy	19.59 We were amsuccessful in powering the rings to full current. We did repair the 16- did-gap which took 6.5 bours. The 189 4,989 gs, was also replaced in the morning. We then tried our 1st ramp and we had a problem with the replacement for 160 4,989 ps. We had to replace it with another ps. The line crew has too leadled every time we want to varyou a prise, bor, it that as 16 tonger look. After that ps. we sented to 1s's operating current we then tried another pamp. This time bol-3,649-ps cannot the link to trip and we had to replace the current regulator card. Also on this ramp the yellow main quad tripped on a current monitor fault. A thin point we give up after trip (not roange, has way that a coughe of white to get the system of current another fault. A thin point we give up after trip (not roange, has way that a coughe of white to get the system of client. Garden find [19] believed during this period was the yol-414 ps. Signal Calle Gibbson Calle from 1010.0 111 / Internal of Power Supply Time allowed was 12 loans = 720 minutes. Actual Time a Sell minutes. Actual Time a Sell minutes. Actual Time a Sell minutes. The company of the system of the system. Sell from 1010 2 to 111 / Internal of Power Supply Time allowed was 12 loans = 720 minutes. Actual Time a Sell minutes. Part Silver S
June 20 to	Switch over to		Sendoners in SMCGV. LO Gues 20, 2006; a 1732-25, LU (Back to MCR) have 21, 2009; a 20,230 1) Work on the Main Chimidale 4 Capther if there on the Main Container of the Blue Main Dipole, Searched down loose connections or other causes for the Loc 24 VAV Signal in the Hes Bos of the Yellow Main Quady 2) Questa Detects of Naviera's Changes and fines 3) Bock-sql-squ'r and hyposa hunger Installed 3) Bock-sql-squ'r and hyposa hunger Installed 3) Bock-sql-squ'r and Green Chemical and 4 (GHT spectra) to be during soul current, Impected all connections, replaced all 4 (GHT Detvers of 4) Bock Scheg and the Confidence of t
June 21	500GeV	ннн	6) High Power Test to 5000 amps for over one hour (Inspected all power supplies during this period)

State Scientified and Compiled by Guipon 9: Stepani

Date	Time	I-dent	S/N	Туре	Loc.	QLI Ref:	Analysis of QPA's	Fault ID
	D (Modified with the Fan Bypass System. Too many Fan Faults in the past due to Faulty Air	
Summer 05	Prep for Run 6	ALL	All	All	ALL		Vane switches. This new system will help bring back Operations and minimize down time during the off shifts only if actual fans are okay.	
	Prep for						SCR Driver Card contained the wrong value resistor causing the FET's to short.	
06-Jan-06	Run 6 Prep for	yo1-sxf	1046	QP02	1B		Replaced Resistor with proper value, tested and restored to operations. J. Drozd SCR Driver Card contained the wrong value resistor causing the FET's to short.	?
06-Jan-06	Run 6	bo3-sxd	990051	QP02	3B		Replaced Resistor with proper value, tested and restored to operations. J. Drozd	?
	Prep for						SCR Driver Card contained the wrong value resistor causing the FET's to short.	
06-Jan-06	Run 6 Prep for	yi3-sxd	990047	QP02	3B		Replaced Resistor with proper value, tested and restored to operations. J. Drozd SCR Driver Card contained the wrong value resistor causing the FET's to short.	?
06-Jan-06	Run 6	bo7-sxf	990045	QP02	7B		Replaced Resistor with proper value, tested and restored to operations. J. Drozd	?
	Prep for						SCR Driver Card contained the wrong value resistor causing the FET's to short.	,
06-Jan-06	Run 6 Prep for	bo11-sxf	990058	QP02	11B		Replaced Resistor with proper value, tested and restored to operations. J. Drozd SCR Driver Card contained the wrong value resistor causing the FET's to short.	
06-Jan-06	Run 6	bo11-sxd	990055	QP02	11B		Replaced Resistor with proper value, tested and restored to operations. J. Drozd	?
	Prep for						SCR Driver Card contained the wrong value resistor causing the FET's to short.	
06-Jan-06	Run 6	yi11-sxd	990043	QP02	11B		Replaced Resistor with proper value, tested and restored to operations. J. Drozd Official Hand Off of the Blue Ring to MCR for Run 6, Machine Setup 22:00 G. Ganetis	?
							reports that Power Supply work is done for tonight. A successful ramp of the magnets has	
							been performed. The RHIC magnets have been left at park.	
6-Feb-06	22:00:00	Blue Ring					04:05: The Blue ring quench recovery is failing on what appears to be a fan fault on the	
							quench protection assembly (QPA) for the bo7-tq4-ps power supply. G. Ganetis is	
							investigating the problem from home. 04:15: G. Ganetis suggests that the fan on the QPA	
							be bypassed by CAS. This supply is not keeping the main quench link down so we can begin threading the beam into RHIC while CAS works on bypassing the fan interlock on	
							the QPA. 04:20: D. Bruno has been called to instruct CAS on the proper QPA bypass	
							procedure. 04:52: CAS has completed the QPA fan bypass for bo7-tq4-ps. The supply is	
7-Feb-06	4:05:00	bo7-ta4			8B	MS-001	now functioning properly. Tech Team replaced 2 fan switches during the day and	Fan
/-Peb-06	Prep for	DO/-tq4		-	85	MS-001	removed the bypass jumper for the fan circuit.	Pan
09-Feb-06	Run 6	y6-q89	990163		6B		Replaced Controller Board. Tom Nolan	
11 E-1- 00	22.00.00	V-II D'					2006-Feb-11 23:00:00 George is done for the night, and has given us the green light. –JLN	
11-Feb-06	23:00:00	Yellow Ring					Yellow ring is ready for operation. y6-q89-qpa swapped out because ON status would not go away on the QPA. Another qpa	
							in the same slot had a problem last week because the fan fault would not go away and it	
	Prep for		00044				turned out to be something on the controller card. Tech Report 2-15-06: Ribbon Cable	
11-Feb-06	Run 6	y6-q89	990167		6B		End of P6 that mates with J6	On Status
							Tech report: One of many that had the new bypass fan jumper installed to prevent false air flow trips, this QPA did in fact have faulty Fan Switches and required replacement. New	
1-Mar-06	maint	bo3-qf6	990097	QP08	4B		OPA installed is s/n 990104 by JW and TN.	Fan Switches
							Fan Switches Replaced: yi2-qf3-qpa (3), yi2-qf9-qpa (3), bi1-qd2-qpa (2), yo1-tq6-qpa	13 Fan
1-Mar-06	maint	Multiple			All		(2), b-qtrim-qpa (3). A total of 13 switches. TN and JW	Switches
							2006 May 21 22 18:00 A Phys Ol I commend during the hystograph or coefficielly while	
							2006-Mar-31 22:18:00 A Blue QLI occurred during the hysteresis ramp, specifically while the magnets were ramping up from part to injection. bo3-qd7 is indicating a QPA fan fault.	
							2006-Mar-31 23:19:10 RHIC QPA Power supply b03qd7 has a fan fault / installing jumper	
31-Mar-06	22:18:55	bo3-qd7			4B	PR-011	as per D. Bruno / Fault cleared and supply is back on. [rhic]	QPA Fan
							2006-Apr-02 21:04:00 The Cryo Control Room reports that no temperature rise has been	
							observed in 7 or 8 o'clock, though a short lived lead flow communications problem was	
							experienced in 4 o'clock after the abort. The QLI appears to have been caused by a QPA fan fault at y8-q6. Contacting D. Bruno. 2006-Apr-02 21:15:00 R. Difranco and H. Ashby	
					ĺ		have installed a QPA fan fault jumper for y8-q6, per Don's instructions. They will confirm	
							the state of the fan while quench recovery is run. 2006-Apr-02 21:23:00 The QPA fan did	
							not spin up during quench recovery. Don is instructing CAS on swapping out the QPA module. 2006-Apr-02 22:15:00 Rich and Henry have swapped out the QPA for y8-q6.	QPA Replaced
							Yellow quench recovery is underway. 2006-Apr-02 23:16:53 2100 Y8-Q6 bad fan on	(Internal Fan
2-Apr-06	20:48:08	y8-q6	990092	QP08	8B	PR-016	QPA. Replaced the QPA with spare unit s/n 990097. [rhic]	Fail)
6-May-06	11:58:45	bi8-qf1			8B	PR-041	13:10 bi8-qf1-qpa fan fault caused the blue link to drop hereDon Bruno [rhic] [ps]	QPA Fan
							12:57 bi8-qf1-qpa fan fault. I installed a jumper plug and made sure the fans were still	
6-May-06	12:12:32	bi8-qf1			8B	PR-042	spinning and then handed it back to MCRDon Bruno [rhic] [ps]	QPA Fan
							31-May-06: QPA generated a Fuse Fault during the High Energy Ramp Test. IR Gun	
				1			showed one IGBT Warm while another Cold. Possible not sharing the Load at Higher	l
							Currents but okay for the current Polarized Proton Run. 8-Jun-06: Found looking from the	
							back, Right IGBT Module Blown. Replaced Module Type CM600HA-24H and IGBT Driver Card as well. Tested to 400 amps, Both IGBT's now sharing the load evenly. D.	IGBT Module
8-Jun-06	maint	b8-dh0		QP10	8B	maint	Bruno, G. Heppner, W. Louie	Blown
							2006-Jun-22 22:36:58 QPA yi7-sxf fan trouble. As per D. Bruno, we installed a fan	
22-Jun	20:21:43	yi7-sxf	990063	QP-02	7B	MCR	jumper, but one fan was not working. Replaced QPA. Back on O.Kcz [rhic] (Replaced unit with s/n 990059) Tech Notes: Replaced bad Fan 028245	QPA Fan
		J. 344		- V2				,
				1			At first it was believed that this supply was being ramped too fast. Jun-26-2006 10:16 I think I misdiagnosed the problem with yi2-tq6. After looking at it some more I thought that	1
							the reason for the high voltage on the output could be that the energy extraction resistor]
				1			was always in the circuit. This morning Tom Nolan swapped out the qpa and now it	l
							appears to be operating okDon Bruno [rhic] [ps]y (6 Events Started on June 25 for a total loss time of 328 minutes for Operations) Team dispatched at 08:05 to replace unit.	
							Finished 08:50:00 (Replaced unit with s/n 990194) Down Time is total of Failures plus	
26-Jun-06	6:56:01	yi2-tq6	1048	L	2B	MCR	Repair Time = 373 minutes	Crowbar

RHIC Physics Run 6 AGS Cold Snake Power Supplies

Date	Time	I-dent	QLI Ref:	Analysis of Main Power Supplies 1004B Official Hand Off of the Blue Rine to MCR for Run 6, Machine Setue, 22:00 G, Ganetis reports that	Fault ID
				Analysis of Main Power Supplies 1004B Official Haad Off of the Blue Ring to MCR for Run 6, Machine Setup 22:09 G. Ganetis reports that Power Supply week is done for tonight. A successful ramp of the magnets has been performed. The RHIC magnets have been left at park.	
6-Feb-06	22:00:00	Blue Ring		2006-Feb. 11 23:00:00 George is done for the might and how given us the smoon light II N Yellow	
11-Feb-06	23:00:00	Yellow Ring		ring in rendy for operation. 2005-Feb. 15 03:15:00 C. Scharheiss has been notified of a b-quain coldillos Voltage range error statum. C. Scharheiss has instructed the MCR to igence further Coldibox Voltage range error alarms for any of the RHIC main power supplies while the magnets continue to sit at injection most of the	
15-Feb-06	MS-6	b-qmain		for any of the RHIC main power supplies while the magnets continue to sit at injection most of the time.	Cold box alarm
23-Feb-06	19:11:39	y-dmain	MS-012	2006-Feb-23 19:20:53 After running the recovery script the yellow quads came up to pack but the dipote did not. The sequence run normally. C-Schalbein is investigating from home. 2006-6b-23 FMIC mains our pack. Let'l see both this in an accuracy be has seen before, the will forward the second packet of	TAPE Stalled
				2006-Mar-19 18:36:00 We receive an alarm for psGroundCarrentWarning on the yellow main dipole	
				Contacting C. Schultheiss as per the alarm response instructions before making any further changes the state of the RHIC magnets 2006-Mar-19 19:11:00 Running quench recovery in blue. C. Schulthe	
				is investigating from none, and mix assets is to ramp to park once the recovery it compute. 2000-set 19 19:35:16 C. Schultheixs gives us permission to clear the alarm and run a hysteresis ramp. Call believes that the GroundFualsCurrentWarning error indication was an artifact of the mains being	
19-Mar-06	18:36:00	y-denain	MCR Call	200-346-9 (1) \$13.000 We convive a share for placeastic numerity since post by either main fight. Containing C. Scholbers as pick a district region interesting short making per future sharely for state of the BBC magnet. 2000-346-19 (9):1100 Ramming quarks recovery in blue. C. Scholber in sweetigating from them, and has related to remap to perfut care the recovery in respite. 2006- 19 (9):25:16. C. Scholbers given on permission to clear the altern and rear a hysterior interp. Cell whitevers that the Construed Currently Wanger or interdinces was an artificial respit. Single conjugate for now after the quarks. If we'll mention the cycles from bours. 2003-346- (9) 9-5000 Cerl 2014 bett, and inclinate for the system was preferred to the size being adult bett, and inclinate for the system was forming as expected.	Ground Current Warning
				2006-Mar-31 22:37:00 A Yellow QLI has occurred while the Yellow magnets were sitting at	
				injection field. 2006-Mar-31 22-45:00 C. Schultheiss is investigating the cause of the Yellow QLI from home. We received an alarm for y-quain Reg DCCT. 2006-Mar-31 23:00:00 Carl reports that	
21 May 06	22:37:15		PR 013	2005-Mar 31 22.3750 A Yellow (LL has occurred while the Yellow magasis were sitting at injection field. 2005-Mar 31 22-56 0C. Schulchies is investigating the case of the Yellow (LL the Yellow (LL) and the Yellow (LL) and the Yellow (LL) and the Yellow (LL) and the Yellow (LL) and the Yellow (LL) and the Yellow (LL) and yellow (LL)	Yellow Main Quad Power Supply DCCT Relay Error
31-3428-06	22:37:15	y-quan	PR-012	Blue main quad had a Reg. watch dog fault. Some thing in the main quad current regulator faulted at reason the BTDL main and current to up to zero. Genetic for current (19-28 The blue main and	d DCC1 King EPOF
4-May-06	18:50:54	b-qmain	PR-036	Blue main quad had a Reg, watch dog fash. Some thing in the main quad current regulator fashed at cassed the RTDL main quad current to go to zeroCanaciu (ju; quench) (19:28 The blue main quad dat not rarge to 30 at at the call of the quench recovery sequence. There were no fashts from TAPE. Carl Schultheirs in taking a look from homeths)	Reg Watchdog
				11:03. The error was the Yellow Quad PFN circuit #1. Investigation after the trip showed the PFN circuit charged up normally and all the ancillary circuits were working. The connections to the PLC input module were tightenedCS	Yellow Main Quad PFN Circuit
26-May-06	9:47:32	y-qraain	PR-045		#1
				Yellow Main Dipole tripped on a Current Monitor Fault. The p.s.'s were recovered by MCR and no further action was taken at this time. Maintenance Day: Unsuccessful in powering the rings to full current. Time allowed was 12 boars — 250 minutes. Actual Time = 800 minutes. CEPS is responsible for 170 minutes. Due to Failures with the Mains.	
8-Jun-06	18:00:00	y-denain	Recovery	current. Time allowd was 12 hours = 720 minutes. Actual Time = 890 minutes. CEPS is responsible for 170 minutes Due to Fuitures with the Mains.	Current Monitor Fault
				The blue main quad tripped on a reg watchdog error. A Circuit Breaker was turned off and on again to news a circuit (DSFP) in the blue main quad OCC. Maintenance Day: Unsucceeded in powering it mages to full current. Time allow due at 2 boars : 720 minutes. Actual Time : 890 minutes. CEPS is augustished for 170 minutes. Due to Failhares with the Mains.	e Oveled Breaker #5 to clear
8-Jun-06	19:05:00	b-qmain	Recovery	propossible for 170 minutes Due to Failures with the Mains.	Control Problem
				CAS: 2006-Jun-11 02:43:14 1950 Complete swarpping out bi9-q89 with spare unit. [thic] CAS: 2006-Jun-11 02:44:56 2015 Trouble with Blue Quad control Don Bruso instructs us to cyle	Cycled Breaker #5 to clear
11-Jun-06	2:44:56	b-qmain	Recovery	breaker #5 in 1004A RBOOCC unser cabinet behind white side door. [rhic]	Control Problem
				Jun-16-2006 02:15 The Vellow main dipole power supply shows a significant drep in current before the trip. Carl is looking from homejgi, cu, con (This statement indicated the Yellow Main Dipole was the cause when in fact it really was the Yellow Main Quad) Opplote confirmed that y-quain dropped in current which occurred -6.41647 point of T-zero. G. Heppaer	
16-Jun-06	1:53:08	y-qreain	PR-061	supply that caused the trip. He's watching while we attempt to recoverjpj, csa, cen	Reg Error
				The 24 Velt to the PLC Remote I/O in the Hot Box was momentarily lost causing the Regulator to go Low, indicating a Querch. The Regulator them Shat-off the drive to the Power Module SCR's and the Current coasted through the last pair ON, slowly decaying until the Regulator pulled the Link on a location. General	
16-Jun-06	1:53:08	y-qraain	Follow Up	Regulator Error.	Ref to PR-061
				Inn. 19. 2006 10:33 This is were similar to the lane 16 Of I Fuest at 01:43 d8 when the Yellow Main	
				Quad power supply's current begins to drift down and the voltage goes into a Size Wave of 193V Peak to Peak. As Carl Schultheiss had explained to me the last time this occurred, 'by looking at the	
				Cold Box Temperature Signals, there was a momentarily loss of 24 volts to the PLC Remote I/O in t Hot Box. This momentarily lost caused the Regulator to go Low, indicating a Quench has he Regulator than Shat, off the drive to the Power Modells SCP's, and the Current counted though the has mix ON.	
				has 3 500 (2013) This is very relative to the late 1 10 (21 Even at 10.21 60 when the Vitter Method prever emply) resemble in the voltage term length very many the word of SVIV. Plant to Pal. As Craft Schaffens had explained to me the last time the occurred, "by looking a tell. For the momental plant of 2 who has the Pal. As Craft Schaffens had explained to me the last time the occurred, "by looking a tell. For most 10 in 1 febr. But The momental plant caused the fleegithet to policy, sinchaffen (2 George 1) and the last flee flee flee fleegithet to policy, sinchaffen (2 George 1) and the last flee fleegithet to policy and containing a Queen. The Regulation of the containing a George 1 febr. The Regulation of the containing a George 1 febr. The resemble of the size of the product of the size of the siz	
17-Jun-06	2:36:10	y-qrasin	PR-063	Cut has to reset the software for the Temperature Signals to continue to record data. 4. Beppera being internal. In the Commission of the Commission of the Commission of the Disco where other are the 24 veri power supplies that provide the power. No home connection found. Only a slight small of harming when commission their power was a commission of the Commission o	Reg Error
20-Jun-06	16:00:00	v-emain	High Current Switch Over	c. necess make at the risk hot area for issue connections and remain the risk hot where there are three 24 well power supplies that provide the power. No loose connection found. Only a slight smell of hereine when entered into the closet area.	Maint
20-Jun-06	16:00:00	b-dmain	High Current Switch Over	A Capacitor Bank for filtering purposes was added across the Main Contactor 1 and 3 (Reference to Carl Shuttheiss for details)	Maint
				2006-Jun-22 03:25:00 Development is off. A Yellow quench link interlock occurred during a ramp to top energy; though the bean in Yellow had been lost much saidie; others the RF loops closed). 2006-Jun-22 03:45:00 C. Schnikheiss was contacted, since the QLI appeared to be tinggered by the y-quain prower supply. Cult reports that there was a current monitor fault. Quench recovery has begun	
			PR-067	2006-Jun-22 03:45:00 C. Schaltheiss was contacted, since the QLI appeared to be triggered by the y- quain power supply. Carl reports that there was a current monitor fault. Quench recovery has begun 2006-Jun-22-04:93:00 Machine Development. RHIC injection has resured.	
22-Jun-06	3:25:21	y-qmain	PR-067	2006-Jun-22 04:03:00 Machine Development. RHIC injection has resumed.	Carrent Monator
				2006-Jun-22 04:14:00 Development is off. Another Yellow QLI occurred under the same conditions 04:32 Both Carl Schultheiss and Food Orsatti are coming in to repair the y-quain problemjpj, vhs., csa. van	
				104:32 Both Carl Schultheiss and Pred Orsatti are coming in to repair the y-quain problemjpj, vbs, css, ym 18:72 A resident with y-crusin crisis that Corl believes we can live with for the nominidar of the run.	
				cus, yas Not 27 A poolsem with y-quasin exists that Carl believes we can live with for the remainder of the rar He and Fred have disabled the current monistering in software in order to allow us to continue with the development work, and will discuss the issue with other Power Supply people during the daytime. - in the cross.	
22-Jun-06	4:14:34	y-greats	PR-068	joj, vbs, cua	Current Monitor
				2006-Jun-24 16:30:00 C. Schultheiss and F. Oesatis are coming in to investigate a problem with the Yellow main quads. The main quads have pelled the yellow quench link 3 times this shift (PFN Faults) well after the power dips laud subsided.	
				2006-Jun-24 20:28:00 Carl and Fred are preparing to replace a bad PFN relay on the power supply relay board for the y-quain power supply.	
				taley board for the y-questin power supply. 2006-Jun-24 21:16:00 Quench recovery has failed. Carl and Fred are reviewing the y-quasin power supply. arisin. 24 21:16:00 Quench recovery has failed. Carl and Fred are reviewing the y-quasin problem arisin.	
				2006 ms. 42 2505.00 Running Yellow quanch recovery again. 2006 ms. 42 2505.00 Running Yellow quanch recovery again. 2006 ms. 42 2517.00 Quanch movery in complete. Carl uports that a loose wire the supplies 15V to the sensing circuit for FPN1 was sightened. The ruley replaced earlier was probably not the cause of the problem. Obligar Power Day for the Weekend)	
24-Jun-06	Ops Log	y-qreain	PR-079	to the sensing circuit for PFNI was uphened. The relay replaced earlier was probably not the cause of the problem. (Major Power Dips for the Weekend)	PFN (3X)
				2006-Jun-25 03:46:00 Another Yellow quench link interlock has occurred, most likely caused by a	
				PPN fault on the y-quain power supply. 2006-Jun-25 04:10:00 Carl is coming in again to investigate.	
				2006-Jun-25 0s:35:00 Food is coming in again. 2006-Jun-25 06:35:00 Starting quench recovery. 2006-Jun-25 06:55:00 Observed recovery has failed. Carl and Fred are continuing their work.	
				2006, Inc. 2004 600 Another Years quant 3 lask introduck has occurred, most likely caused by a form 2004 for 20	
25-Jun-06	3:46:32	y-greain	PR-081		PFN
				While Carl and Fred where working on the Yellow Main Quad PFN Fault, the Blae Main Quad tripped on a Regulator Error. Talking to Carl, he has no idea since they where not working near this	
25-Jun-06	7:05:41	b-qmain	PR-082	leystem. The PLC was accidentially releaded with the old software. It was several bears after recovery when	Reg Error
25-Jun-06	13:27:16	y-qmain	PR-083	The PLC was accidentially reloaded with the old software. It was several hours after recovery when this QLI Event occurred. Carl had to go into the software and make the changes to the newer version C. Schallbriss.	Current Monitor
				15.52 This Blue QLI Event was caused by the Blue Main Dipole power supply. A Current Monitor Fault developed during the switchover between Flattop and RampG. Heppner [thic] [quench]	
26-Jun-06	6:57:20	b-dmain	PR-085	[Fault developed during the switchover between Flattop and RumpG. Heppner [rhic] [quench]	Current Monitor

da Zemmidal and Compilal dej Grupog 9. Regions

Date	Time	I-dent	HKPS S/N	Loc.	QLI Ref:	Analysis of House Keeping Power Supplies	Fault ID
						Official Hand Off of the Blue Ring to MCR for Run 6, Machine Setup 22:00 G. Ganetis	
						reports that Power Supply work is done for tonight. A successful ramp of the magnets has been performed. The RHIC magnets have been left at park.	
6-Feb-06	22:00:00	Blue Ring				ocen personned. The titre imagnets have seen left at pairs.	
						Power Supply b12-q6 had tripped to the off state. No action taken, TAPE was able to restore	
6-Feb-06	22:16:59	b12-q6	115	12A	MS-001	for now. During the day, Techs replaced Control Card, Digital Iso Card and the HKPS.	Off
						2006-Feb-11 23:00:00 George is done for the night, and has given us the green light. –JLN	
11-Feb-06	23:00:00	Yellow Ring				Yellow ring is ready for operation.	
						Jun-25-2006 18:11 The Yellow Link tripped due to a faulty House Keeping Power Supply for	
						yo1-qf8. I found both fuses had failed and tried replacing them once. The Supply then worked	
						but as MCR had just restored the Blue Link, the Control Power for yo1-qf8 failed once again.	
						This time, swapping out the HKPS fixed the problemG. Heppner [rhic] [quench] Replaced	
25-Jun-06	14:05:11	yo1-qf8	108	2B	PR-085	with s/n 097	HKPS

Date	Time	I-dent	Sector	QLI Ref:	Analysis of Ice Occurrences Official Hand Off of the Blue Ring to MCR for Run 6, Machine Setup 22:00 G. Ganetis reports that Power	Fault ID
					Official Hand Off of the Blue King to MCR for Run 6, Machine Setup 22:300 G. Ganetis reports that Power Supply work is done for tonight. A successful ramp of the magnets has been performed. The RHIC magnet have been left at park.	
6-Feb-06	22:00:00	Blue Ring			2006-Feb-11 23:00:00 George is done for the night, and has given us the green light. –JLN Yellow ring is	
11-Feb-06	23:00:00	Yellow Ring			ready for operation.	
15-Feb-06 15-Feb-06	MS-6 MS-6	Heaters Heaters	6		Low Temp Alarm, Team found a faulty heater and replaced. Low Temp Alarm, Team found three (3) faulty heaters in this section and replaced.	Low Temp Low Temp
16-Feb-06	Maint	Heaters	8		Ice ball tree heaters were investigated, all were found to be operational, no repairs needed	Low Temp
16-Feb-06	Maint	Heaters	10		Ice ball tree heaters were investigated, all were found to be operational, no repairs needed	Low Temp
16-Feb-06	Maint	Heaters	12		Ice ball tree heaters were investigated, all were found to be operational, no repairs needed	Low Temp
17-Feb-06	20:15:00	Valve Box			2006 Feb. 17 201:500 G. Ganeris was constricted about a 6 o Cook valve box temp out of range alarm, and 1 on find out about the optential impact of missing all of the temp and humidity data from 1008. He will investigate the 6 o'clock alarm, and feels that the 1008 problem is not so critical that it needs to be resolved overnight. A message was also left for Xv. Lonic. 2006-Feb. 172-590-00 Wing returned our call. We will altempt to contact H. Hartmann again about the "no Labview data" alarms first thing in the morning on Sauntuly.	
21-Feb-06	23:16:00	PN7Q51 CB#4	6		22-46-47 G Ganetis has contacted MCR regarding low temperatures in the 6 o'clock notator region. He believes that the heaters for preventing iceballs may be off in that area. D Bruno has instructed CAS in turn on the heaters, they will go in when we ramp down next. 2006-Feb-21 23-1600 Ramping down from full carrongy in RHIC. Preparing for CAS access to repair lev-all hadres in the 6 o'clock sector. 2006-Feb-21 23-2700 Machine development off. Access into RHIC begins. 2006-Feb-21 23-39000 Access complete. C. reset breaker #4 apart 7501 from the 2006-Feb-21 23-39000 Access complete. C.	AS Breaker Trip
			B and Y 10		Loss communication (IceBall No LabView Data) with Blue and Yellow Sectors 10 and 11. An AC Reset v performed using FIT. However, this reset requires an Operator to wait 45 minutes until the system is restor and data begins to read once again. This has happened before (reference to 17-8-66) and has been taken	ed
24-Feb-06	8:56:13	Temp String	and 11		with the Specialist as to why this takes so long and what can be done to fix the long wait. W. Louie.	ap IceBall Data
					Sensor not responding. (Iceball No LabView Data)Secondary sensor reading okay, to be replaced during n	ext
28-Feb-06	7:20:16	Y10-17TB	10		maintenance day March 1, 2006	Sensor Fail
1-Mar-06	maint	Y10-17TB	10		Sensor Failed 6D0000003FCBD128replaced with ID# 8A00000047298E28 and Database updated.	
2-Mar-06	13:20:17	b2-15TB	2		Sensor not responding. Tried an AC Reset but did not work. Put on the RING Access list as a low priority the redundant sensor is reading fine. Will replace next maintenance day if not allowed access before hand.	
			10		System showing entire string fails (not responding) and then clears. This has happened several times and system re-boots by the experts seemed to not work. Put on the maintenance day list for access to investigat	ea
3-Mar-06 9-Mar-06	Multiple Ring Entr	y10 string b2-15TB	2		possible loose wiring connection. Sensor was fine, wrong Address ID was placed into the data base and had to be corrected.	Sensor Fail
10-Mar-06	Multiple	y10 string	10		Has been working since possible AC Reset back on 3-Mar-06 so no action is needed as of this writing	
10-14111-00	Munipic	,10 ming			2006-Apr-08 09:45:00 W. Louie has been notified of 11 iceball temp out of range alarms for Blue and Yell	ow
8-Apr-06	9:45:00	PN1Q52 Brk #1	1		has been reached to extend the store by one hour. D. Bruno has informed the MCR that the ichedal breaker sector I will need to be rest by CAS affer the current store is damped, PHENIX will also make as hot react at that time. 2006-Apr-68 13:55 00 Setup is off. After performing some beam diagnostics at store, the beam has been abstract CAS, TARA, and PHENIX are making RHIC accesses now. (e-8-bin) was verse to lot is suspended task. 2006-Apr-68 145:50.0T. Costamo and J. Decicco have successfully reset breaker #1 at panned PMIV23: to restore the ichedal heater tree power in sector 1. Don has confirmed that the lead low tem platma are in the process of clearing.	ır
30-Apr-06	17:28:00	PN5Q52 Brk #9	5		MCR: 2006-Apr-30 18.5853 G. Ganetis is contacted at the request of Cryo regarding temperature out of re- plants that have been received. 2006-Apr-30 19.11.32 G. Ganetis seports that the heaters are off for 5 cell contacts. He indicates that the heaters will need to be rerest at the end of the store. Contacting D. Dramo will will give CAS instructions on how to review the heaters. CAS: 2006-May 10 11.315 Hall no orees a break for the heaters to soft piece bells him forming at RHE except. 5 Found that the breaker was in the voltage gauge of 240 and below and suited up in the appropriate PPE. Also had 2 person that were trained to oper the breaker. Reset breaker PP in panel pall/202 asp etc. Bremo, (thic)	er e
1-May-06	2:07:09	PN5Q52 Brk #9	5		2006-May-01 06:00:00 Cryo reports that the ice-ball problem in sector 5 has not cleared. This problem will require revisiting when this store ends. Lee Team Granted permissionat 11:00, keys in hand at 11:18. Problems Found: Hypor of Kilsons to 300 volts, one failed at 200 volts as Br. 84x6-12 cal has keft most DX Magnet). Also discovered a Fan fail on Y5-rod-3-12 Cand back from DX Magnet). Due to time restrictions the Mechanical institution, Team safely applied new fin on 100 original. (Shoulde be looked at next maintenance day). Keys returned: 13:50. System showing entire string fails (not responding). Put on the maintenance day is for access to investiga	
3-May-06	10:26:21	y10 string	10		possible loose wiring connection. Ice Team found Sensor Y10-02TB(0C0000003FA81928)Shorted and replaced with ID #:	Sensor Fail
10-May	Maint	y10 String	10	Ref to May 3	32000000388C2F28. Data base updated and restarted. BK and W. Loiue	Repair
					Temp Ont of Range for Blue and Yellow DX thru Q4 Magnets in Sector 1. Lev Team granted access at 08: too locate problem. May 1-1200:1514a, ground fault circuit between that feeds the sector 1 Dx-Q4 magnet leve heaters and thermostats in sector 1 tripped that morning. After resetting it once the problem had to be investigated because it tripped again after 10 minutes. Rich Conte and Dee Droubl 1-posted each thermostate and the sector of the string. They aurrowed the problem down to 2 thermostates on the yellow Q2 tree. One thermostate on the vertices in the west replaced and re-connected with in heater. The other heater was worked to the section of the sectio	
11-May	5:17:29	PN1Q52 Brk #1	1 B and Y 6		developing. On the next mannerance day we replace this information and reconnect it and the neater to the circuit. John Bruno [rhic] [ps] Alarm Log indicated IceBall No LabView Data and cleared at 05:28:13. No explanation found as of this	Breaker Trip
21-May	4:05:47	Temp String	and 7 B and Y 4		writing. Alarm Log indicated IceBall No LabView Data and cleared at 18:17:49. No explanation found as of this	IceBall Data
21-May	16:13:32	Temp String	and 5		writing.	IceBall Data Thermostat /
31-May	Maint	YQ2	1		(Reference to 11-May) Replaced YQ2 Thermostat and heater	Heater
31-May	22:36:06	PN3Q52 Brk #3	3		W. Louie has given instructions to CAS to turn on a circuit breaker for an ice ball heater in RHIC alcove 3c sometime during the morning. G. Ganetis & company will also investigate the problem with a possible bad çable that cause the second ramp to fall during this shift.	Breaker Trip
1-Jun	9:54:00	PN3Q52 Brk #3	3		June 1, 2006 Tunnel Access granted due to a QLI Event, Rich Conte and Tom Nolan went in to work on th Snake Tree heater problem in sector 3. They found high leakage current on one of the thermostats after hi- potting them. They replaced the thermostat and the cicuit breaker is not tripping anymore.	Repair
6-Jun	7:43:52	Temp Suin	B and Y 4 and 5		Alarm Log indicated IceBall No LabView Data and cleared at 09:28:35. No explanation found as of this writing.	IceBall Data
6-Jun	7:43:52	Temp String	and 5		writing.	iceBall Data

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Date	Magnet ID	Sector	Ring	Analysis	Limitations	References	Results
01 Apr 02	bi9-snk7-2.3	9C	Blue	A resistor short to ground internal of the magnet required that the QPA center tap to the resistor in parallel with the magnet load (ground wire monitor circuit) had been removed to continue with the Polarize Proton Run.	None	George Ganetis	Magnet Removed during summer shutdown and repaired.
01-Apr-03	DI9-SNK7-2.3	90	Blue	Kun.	None	George Ganetis	shutdown and repaired.
17-Apr-03	yo9-snk7-2.3	9C	Yellow	comment by Ganetis BIG PROBLEM!!! It looks like yo9-snk7-2.3 has one of its magnets open. Magnet # 2 has a break in its superconductor and the current is only going through its internal quench protection resistor. This is the initial finding, more analysis will be done to try to find the cause or when this failure happened	Unable to Run	RHIC Physics Run 2002 2003, Daily Quench Events for the Month of April 2003	Internal Magnet Open. Removed and repaired during summer shutdown.
Pre-Run FY04	yi7-q6		Yellow	Unable to go above 30 amps due to higher then normal magnet resistance.	Current Limited	George Ganetis / Don Bruno	Magnet removed and repair team found a Cold Solder Joint in the Super Conducting wire.
24-Nov-04	b2-dhX	2	Blue	Because the magnet clearance to the ground is lower then other dhX magnets, an extra fan had been installed due to extra lce formation around the tree-leads.	None	Phone call by Wing Louie, November 24, 2004	More Air flow to remove condensation.
29-Nov-04	D6 thru D8	10	Yellow	D6 Shunt Buss Short to Ground had been discovered. (11-30-04) testing in progress to isolate the problem and to decide on a fix or run with special ops. (Problem went away when warm up was done and Hypot testing to locate the short) The D6 Super-conducting Tap was disconnected at the time of inspection once the magnet was opened up because it is not used and believed the short may have occurred there.		George Ganetis	Repaired
02-Dec-04	Y12-Q3	12	Yellow	Q7 Shunt Buss to Q9 Short to Ground occurred and then Super-conductor open during High Energy Testing. Magnet warmed and opened where the problem was located in the Q3 splice. (Unexpected shutdown of Physics to repair 29-Nov-04 problem along with this major problem. Time Down Delay = 2 1/2 weeks)		George Ganetis	Repaired
	12Q6	12	Blue	Blue Sector 12, Q6 Shunt Buss has an 83 uohm resistance when powered to 120 amps during the Proton 205 Gev test.		George Ganetis	during the summer shutdown 05 to try and locate the high resistance to a smaller group of magnets for the next cold run.
30-Mar-05	AGS Cold Snake	AGS	Orange	History in the making, First Cryogenic Cooled Magnet placed into the AGS Ring!	Commissioning Run	Gregory P. Heppner	WORKS!!!
04-Apr-06	yo4-cqs9	5A	Yellow	Physics indicated that magnet YO4-CQS9 at the end of the yo5-sxd sextupole string was in a reverse polarity state. Switched lead at the terminal block (power side) so now Power Lead BLK is on #3 + along with Crowbar Red and Power Lead RED is on #4 - along with Crowbar Blk. G. Heppner	None	Don Bruno	Fixed but has to be swapped on the Magnet side not the DC Cable side like it is now.

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MANUAL PART PART

Date	Time	I-dent	S/N	Loc.	QLI Ref: Analysis of Gamma-1	Fault ID
		_			Yo9-qgt in 9C was in the OFF state on 10/8/05. This was a problem in run 4 but not run 5.	
10-Oct-05	Prep Run 6	yo9-qgt		9C	Keep an eye on this. D. Bruno	Off
					Don reported that this unit tripped to the Off state twice this month. It was decided to	
					replace the 3U chassis with a spare unit. Supply was in standby when arrived and took a	
					little time to investigate D connectors and other key elements but could not get the unit to	
					fail. Replaced 3U chassis and used the original cards. Did notice that the CPU for the Control Card was not properly seated whereas the pins where not centered in the socket but	
					rather all off to the sides of the corresponding connections. Removed unit in 7W: Nothing	
					obvious loose but did notice that the jumper wire used to replace the fuses did look like	
					cold solder joints. Re-flowed solder and unit is now in the test rack in Standby Mode. Will	
26-Oct-05	Run 5	yo9-qgt		9C	continue to monitor its progress. G. Heppner	Off
07-Nov-05	Prep Run 6	yo9-qgt		9C	Yo9-qgt-ps tripped OFF again. D. Bruno	Off
10-Nov-05	Prep Run 6	yo9-qgt		9C	Yo9-qgt tripped to the off state again!!!!! I turned it back on.D. Bruno	Off
					Don reported that this unit still tripped to the Off state after replacing the 3U Control	
					chassis. Node Card Cable was the next thing to be replaced. Supply still tripped to the Off	
16-Nov-05	Prep Run 6	yo9-qgt		9C	State after this swap. J. Wilkie	Off
					Found yo9-qgt tripped to the off state again!!! We have already replaced the 3u chassis and	
22-Nov-05	Prep Run 6	yo9-qgt		9C	node card cable, what to do next???? D. Bruno	Off
28-Nov-05	Run 5	yi10-qgt		11A	Don reported that this unit had tripped to the Off state. No Action Taken As of this writing.	Off
17-Jan-06	Prep Run 6	yo9-qgt		9C	Don reported that this unit had tripped to the Off state. No Action Taken As of this writing.	Off
					Official Hand Off of the Blue Ring to MCR for Run 6, Machine Setup 22:00 G. Ganetis	
					reports that Power Supply work is done for tonight. A successful ramp of the magnets has	
6-Feb-06	22:00:00	Blue Ring			been performed. The RHIC magnets have been left at park.	
0-1 00-00	22.00.00	Dide King			2006-Feb-11 23:00:00 George is done for the night, and has given us the green light. –JLN	
11-Feb-06	23:00:00	Yellow Ring			Yellow ring is ready for operation.	
					Jump card swapped out because the capacitor voltage went past the Hi-VCMD tripping the	
					power supply on CAP-OV. Put spare card from 1007W and cap voltage didn't reach HI-	
					VCMD. Took spare out of floor test unit in 1007W and this card worked. Jim O. now has	
4-Feb-06	Prep Run 6	bo3-qgt		3C	all the spare cards for repair. D. Bruno	Cap-OV
					While observing Alarm Page, yo9-qgt tripped again indicating "No PS / Illegal State". No	
					complaints from MCR, talked to Don about it and he said it has been tripping to the Off	
					State multiple times in addition to yi10-qgt doing the same. Put onto maintenance list.	
8-Mar-06	11:24:17	yo9-qgt		9C	Later after lunch I checked it at it was on! Mystery.	Off
					2006-Mar-10 11:26:00 Yi10-qgt-ps has tripped on a crowbar fault, we are unable to reset	
					this supply using normal methods. D. Bruno has been contacted for assistance. 2006-Mar-	
					10 11:45:00 D. Bruno has restored yi10-qgt-ps, he informed us that the supply has been	
					problematic as of late and he is planning to replace it during the next maintenance period.	
					(Tech Note: MCR Could not recover to the On status because they did not reset the wfg to zero. This was still set at 7 amps and when the supply was turned on, it would immediately	
10-Mar-06	11:26:00	yi10-qgt		11A	crowbar)	Crowbar
	11.20.00	J110 45t			Did a full Inspection (Shake Rattle and Rolled chssis, checked all D connectors, AC Power	Crowdu
					Points, Opened 3U Chassis for internal inspection of loose connections, possible Control	
					Card sensitive to the touch (found CPU chip not aligned properly in the socket), other then	
					that, found no obvious problems. Talked to Experts and decided to jump out the HKPS	
					Under voltage circuit by removing pins 5 (Green) and 6 (Blue) from the J16 Molex	
					connector on the Backplane board and replaced with a jumper. This will not harm any	
					operations of the Gamma-T but will allow us to further investigate this circuit within the	
15-Mar-06	maint	yi10-qgt		11A	HKPS. GH	Off
					Jumped out the HKPS Under voltage circuit by removing pins 5 (Green) and 6 (Blue) from	
					the J16 Molex connector on the Backplane board and replaced with a jumper. This will not	
					harm any operations of the Gamma-T but will allow us to further investigate this circuit	
15-Mar-06	maint	yo9-qgt		9C	within the HKPS. GH	Off

Date	Time	I-dent	S/N	Loc.	OLI Ref:	Analysis of 300 Amp Suncraft	Fault ID
Dutt		- utili	D/1-1	1	QLI IIII	While testing IGBT's for failures, s/n 005 indicated no good. Also the internal Power Resistor	1
05-Aug-05	Prep for Run 6	yi2-q89	5	2B		that is 10 ohms, was reading around 800 ohms. Replaced supply to repair same. Jeff W. Shorted IGBT / Faulty Power Resistor	
						During the Summer Dynapower Re-work, this power supply would trip to the off state bringing	
						down the yellow link. Found hardware missing on the power supply side J108 causing the node card cable to intermit causing a loss in comunication. Jeff had added hardware.G. Heppner	
						Supply ran fine for awhile and then began to trip to the off state once more. Possible internal damage to the wiring of this J108 connector since it was not checked at the time of hardware	
00 11 01	Prep for Run 6		16	4B		replacement. Supply was pulled today by Tome Noland and Jeff Wilkie and replaced with s/n	off
02-Feb-06	Kun 6	y4-q89	16	48		005. G. heppner Official Hand Off of the Blue Ring to MCR for Run 6, Machine Setup 22:00 G. Ganetis	OII
						reports that Power Supply work is done for tonight. A successful ramp of the magnets has been	
6-Feb-06	22:00:00	Blue Ring				performed. The RHIC magnets have been left at park.	
11-Feb-06	23:00:00	Yellow Ring				2006-Feb-11 23:00:00 George is done for the night, and has given us the green light. –JLN Yellow ring is ready for operation.	
11-Feb-06	Prep for 6	yi10-q89		6B		swapped out the current regulator card due to fail of Tap Test, bad relays.	I-Reg Relays
						23:47 Don Bruno is verifying the QLI analysis from home. –JPJ Feb-16-2006 00:35 Don has	
						given instructions to the Support crew on handling y6-q89. First they will swap out the current regulator card. If this doesn't fix the problem, we will probably have to call in a specialist to swa	p
						out the entire supply. –JPJ, 2006-Feb-15 23:37:00 D. Bruno has been contacted to verify that the QLI was caused by a y6-q89 power supply failure. J. Laster contacted the MCR about the	
						FEC problem. It has been reset to clear a suspended event helper task. 2006-Feb-15 23:55:00 Don is instructing CAS to swap out the current regulator card for y6-q89. 2006-Feb-16 00:55:00	
						The current regulator swap did not clear an error signal indication for y6-q89. CAS will swap or	
						the supply. 2006-Feb-16 02:20:00 T. Costanzo and J. Decicco have completed the swap of power supply y6-q89. Don is testing it from home. 2006-Feb-16 02:38:00 Machine Setup.	
15-Feb-06	23:23:05	y6-q89	1	6B	MS-007	Running Yellow Quench Recovery. (s/n 018 installed)	Error
						While MCR was recovering fom a QLI, Don and Joe went out to building 1008B to perform a Tap Test on the Current Reg Card for this supply because readbacks seemed to be off. Tapping	
22-Feb-06	check	b8-q89		8B		on the card proved to improve the readback but did not clear the problem. Current Reg Card needs to be swapped out during the next maintenance day.	
1-Mar-06	maint	b8-q89		8B		Tech report: Current Regulator card was replaced and the original brought back to the shop where Jim O found the K2 Relay was faulty. He repaired the card and returned it to spares.	I-Reg Relays
	l					Tech Report: 1)Soldered press fit connectors on 3u chassis backplane for DCCT and voltage regulator. 2)Added missing hardware to MADC and Node card D connectors. 3)	
						Replaced hkps because the original one had 8V for the DCCT but the 300A	
	Repair					p.s. requires 12V for the DCCT. The new hkps has 12V for the DCCT. 4)When it was first turned on, after repairs 1-3 the contactor would not close because the aux set of contacts was no	
24-Mar-06	Update	y6-q89	1	-		seated properly. After re-seating the aux set of contacts the p.s. appears to be fixed.	
						A Beam Abort took place at 21:06 on April 3, 2006. Comment by George on Apr-04-2006	
						00:03 The power supply that went un-stable was y12-q89-ps. It has the largest current swing tha cause all other p.s. on the qd bus to reactGanetis [yellow] [ps] Tech Report: Controls failure	Voltage
4-Apr-06	9:20:00	y12-q89		12A	Beam Abort	this morning, Tech Team is replacing the supply during this down time. Controls failure permitted an Unscheduled Maintenance to occur so s/n 006 that indicated an	Unstable Voltage
4-Apr-06	Uns-Maint	y12-q89	6	12A	Beam Abort	unstable voltage was replaced by the CEPS Day Crew. (/n 015 installed). TN and JW	Unstable
						31-May-06: Power Supply tripped during the High Energy Ramp Test. The Current and Voltage spike and then 3 seconds later the current jumps from -265 amps to -250 amps while	
8-Jun-06	maint	bi9-q89	13	10A	250Gv Test	Iref remained at -265. Supply eventually failed on Error. 8-June-06: Tech Team replaced supply with s/n 001, T. Nolan, J. Wilkie	Error
						New replacement s/n 001 failed High Current test. Smell of buring when Team investigated.	
8-Jun-06	maint	bi9-q89	1	10A	250Gv Test	Power Supply replaced with s/n 004. T. Nolan, J. Wilkie 21:47 It looks like bi9-q89 tripped the link. bi9-qf9 is nested within it but it looks like bi9-q89	Error
	l					went first. I turned on both p.s.'s by themselves and ran them up to 2x their operating current	
						and they were fine now. I spoke with MCR and we decided to leave bi9-q89 alone for now and if it trips again we can either swap out the current regulator card for bi9-q89 or the whole p.s.	
						We will need to call the line crew in if we have to swap out the whole p.s. because the main blur quad must be locked out. I will call CAS now and prepare them in case this has to be done. Done	
9-Jun-06	20:42:57	bi9-q89		10A	PR-056	Bruno [rhic] [ps]	Error
						Jun-10-2006 14:25 Comment: It looks like bi9-q89-ps tripped the blue quench link as it did last night. Failed at -35 amps after running a dayDon Bruno [rhic] [ps]	
10-Jun-06	13:31:16	bi9-q89	4	10A	PR-057	CAS replaced Power Supply s/n 004 with spare s/n 016	Oscillation
						Jun-10-2006 18:43 Comment: The spare that was installed in bi9-q89 does not have the 15V on the cards in the 3u control bucket. (FET, AC Phase, Ring Security Faults will not clear) There is	
	l					something wrong with it. CAS is going to get another spareDon Bruno [rhic] [ps]CAS	Spare PS Not functioning
10-Jun-06	13:31:16	bi9-q89	16	10A	PR-057	the Line Crew being needed and the one spare failed and the process had to be redone)	properly
						05:02 We found the source of the blue beam loss. Corrector supplies bo6-q89,bo6-qf8, and bi5-	
						qf9 all show Iref Current range errors at the times of the blue beam loss at 0227 and 0408. All 3	
						supplies appear to be on the 6b-ps1 front end -cjs, mes,NAK 10:05 Power Supply b6-q89 Started to Oscillate and then cleared. Bo6-qf8 and bi5-qf9 where	
12-Jun-06	4:08:27	b6-q89		6B	Beam Abort		Oscillation
						2006-Jun-21 15:07:00 We encounter a problem with bi9-q89 that likely accounts for the quench	
						link interlock. D. Bruno indicates that the power supply must be replaced. The line crew must be called in to assist with locking out the upstream breakers in the substation. Supply failed at	
						-262.54 amps, the power supply failed. Fred Orsatti, Gregg Heppner, and Joe Drozd swapped out bi9-q89-ps. Replaced Power Supply s/n 006 with spare s/n 016The new one was run alone	Failed at High
21-Jun-06	14:51:49	bi9-q89	6	10A	PR-066		Current
						07:20 yo5-qd3 is not coming on through the quench recovery sequence. G. Ganetis has been contacted about the problem.	
						07:26 George has reset the above mentioned supply and successfully recovered the vellow	
24-Jun-06	7:11:44	yo5-qd3		4B	N/L	quench link interlock. (07:11:44, Tape stops 1st time, 07:19:24 Tape stops 2nd time, Tape restores past yo5-qd3 at 07:37:32)	AC Phase

Data Ricounshal and Compiled by Guyany 9. Hop poor

RHC Physics Rus 6
AGS Cold Snake Power Supplies

27-06-00 Sent 10 paging Sent 20 Sent								
2.00	Date	Time	I-dent	S/N	Loc.	QLI Ref:	Analysis of 150 Amp Suncraft found not to function when the breaker was turned on. Replaced with vin 013 J	Fault ID
2.00			yo8-q/2	84		-	Wilkie In Repair found not to function when the breaker was turned on. Replaced with vin 008 J	Off
2.00	27-Dec-05	Sum 05	bi8-qd2	107	88		Wilkie In Repair Official Hand Off of the Blue Rine to MCR for Run 6. Machine Setup 22:00 G.	Off
19-00 to 200000 Value Roy							Ganetis reports that Power Supply work is done for tonight. A successful ramp of the magnets has been performed. The RHIC magnets have been left at park.	
13-15-16-16 Program 15-15-16 Program 15-1			Blue Ring		H		2006-Feb-11 23:00:00 George is done for the night, and has given us the green	
13-96-06 18-15-16					-			
15.Mex 60 10.75	11-Feb-06	Prep for 6	yu5-146		68		ewapped out the current negalator card due to fail of Tap Test, bad relays. ps status on pet page flashing between AC POWER, REMOTE and AC	I-Reg Relays
15.Mex 60 10.75							POWER, REMOTE, ON. Also sometimes NO PS, ILLEGAL STATE. We examined node card D connector on the rear of the p.s. and wiggled it. Nothing.	
15.Mex 60 10.75	11-Feb-06	Prep for 6	yi10-qd2		10A		Also wiggled node card cable at node card end. Nothing. We ended up swapping control card and digital isolation card with yo%-qf2. Neither one has a problem	
15.Mex 60 10.75							Power Supply Status would go from NO/PS Illegal STATE to the correct status. Don tapped on the Control Card and the Digital Iso Card. It appeared the Iso	
15.Mex 60 10.75	15-Feb-06	MS-6	ys/9-q/2		10A		Card was at fault as I watched PS all clear while he was out in the field performing the test. Swapped out the Control Card and the Digital Iso card. GPH	
13-May 60 1875 18 18 18 18 18 18 18 1							Snapshot indicated that the Power Supply Voltage went to Zero. Don ran the supply to -30 amps and all looked well. Could not repeat the problem but did	
200 May 10 23.21 Physics of Roune during the springer, coming a chapman with the part of the formation and the 10-2 of the springer, coming a chapman with the part of the mean street and the control of the part of th								_
April 1815 181 1	13-Mar-06	11:57:34	bi1-tq6	94	2B	MCR Call		Error
April 1815 181 1							2006-Mar-19 05:23:21 Physics off. Beam abort due to bi12-tq4 tripping, causing	
April 1815 181 1							a companion crip and a store inox monator americae. Less was caused and tried to run it. No current output at 1 amp, CAS swapped out the current regulator and	
April 1815 181 1	19-Mar-06	5:23:21	bi12-sq4	64	12A	MCR Call	sin (84 (History of 084 = Repaired twice, Aug 2004 and Sept 2005)	No Output
April 1815 181 1							16:08 The quench detector in 10026 tripped bit-tq6-ps because the p.s. started to oscillate. We turned the p.s. back on and it ran fine. This is the second p.s. in	
19-April Marc M-1-apt 48 12-5 (Instead the voltage open and marked to what the first contrading to the contract of							this position to have a problem. The current regulator card was the only card common to both p.s.'s. To eliminate the the current regulator card as the source of	
19-April Marc M-1-apt 48 12-5 (Instead the voltage open and marked to what the first contrading to the contract of	7-Apr-06	15:15:56	bi 1-tq6		28	Aux QD	the protects 1 on 1 votats swapped the current regulator care out, if the protects returns please call me and the supply will be swapped outDon Brano [thic] [ps]	Oscillation
1.34m of 1.67 22 1.62 1.67							April 18, noticed the voltage signal readback was half the value that it normally should be. There was a current Store going on at the time so all we could do was	
1.34m of 1.67 22 1.62 1.67							take front panel readings and confirmed that this was real. During maintenance on April 19, we replaced the Type 1 Buffer Card and the readback returned to normal.	
1.34m of 1.67 22 1.62 1.67	19-Apr-06	Maint	bi4-tq4		48	Observation	Periodically checking PS All, the problem has not come back. There was no faults founds with the Buffer Card that was pulled. G. Heppner	1/2 Value of PS Voltage
1.34m of 1.67 22 1.62 1.67							Physicist note: Last year the Yellow Ring had a noise problem and this year the noise (movement) switched over to the Blue Ring. Possible cause was that a	
1.34m of 1.67 22 1.62 1.67							power supply had been moved from yellow and placed into blue. Records indicated that during the summer shutdown, yo8-q/2 x/n 84 was swapped out later	
1.5May 60 16-72 162-94 16 17 18 18 18 18 18 18 18	10-May-06	Maint	bi12-tq4	84	12A	Observation	was installed into bi12-ep4. So, s'n 084 for bi12-ep4 was swapped out today and replaced with sin 006.	Physicist Note
1.5 Mag 60 16.0 Feb 1.5 Mag 60 1.5 M								
1.5 Mag 60 16.0 Feb 1.5 Mag 60 1.5 M							tq4 has been restored remotely. The RHIC magnets are ramping back up to injection. NOTE: Power Surely (vin 084) was working fine and had no	
1.5 Mag 60 16.0 Feb 1.5 Mag 60 1.5 M							problems but Wolfram wanted it swapped out because it was in the yellow ring last war and now blue ring is noisy. The new nower surely (s'n 006) is tripping	
15Mm of 11-070 M12-yel	11-May-06	1:07:22	bi12-sq4	6	12A	MCR	to the OFF state. 22-42 Power Supply to 12-to4-ps has tripped to the OFF state twice in the past 2	Off
15Mm of 11-070 M12-yel							days. If it trips to the OFF state again I would recommend that it get swapped out. I have e-mailed CAS the procedure on how to swap it out and I also told	
15Mm of 11-070 M12-yel							them what IPE is required in the e-mail. If MCR wants bi12-tq4-ps to be ewapped out just call CAS and they can do it with the procedure. If there are any	
15Mm of 11-070 M12-yel							questions you can call me. I also left a phone message for CASDon Bruno [thic] [ps] 23:22 O.KBSB <u>NOTE:</u> Power Supply (s'n 684) was working fine and	
15Mm of 11-070 M12-yel							had no problems but Wolfram wanted it swapped out because it was in the yellow- ring last year and now blue ring is noisy. The new power supply (s/n 006) is	
May 2-30 (00 of 1 There is a problem with \$10 (step in The rest of state 10 (step in the state 1	11-May-06	18:25:39	bi12-sq4	6	12A	MCR	tripping to the OFF state. May-12-2006 13:11 bi12-tq4 tripped to the OFF state again. Rich Conte and Joe	Off
May 2-30 (00 of 1 There is a problem with \$10 (step in The rest of state 10 (step in the state 1							Droed just finished swapping out the power supply. Don Bruno [rhic] [ps] (Call to Don at 11:50AM, Team Dispotched at 12:05PM and done at 12:55PM)	
Solution College Col	12-May-06	11:47:09	bi12-tq4	6	12A	MCR	Replaced the supply with s/n 107.	Off
Solution College Col							is flashing between an OFF state and a "No p.s." state. Don got the call around 23-40 on 5/19/06 but CAS was have working on smoker resident. CAS stated	No PS /
Solution College Col							to work on this around 00:48:47 and was done by 01:04:52. They had discovered the 25 nin D Comporter (Node Cord Coble) was loose at the neason	Illegal State
12 May 60 11220 12134 1	19-May-06	22:00:19	yi10-u ₂ 4		10A	MCR		Connector)
12 May 60 11220 12134 1							May-20-2006 00:41 There was also a problem with bold-up4-ps. AT 23:28 the quench detector tripped it but there is no snapshot to go along with it and I don't	
12 May 60 11220 12134 1							know why. I will have to ask Jonathan Laster. I looked at qdplot and I saw that the current and voltage took off but without being able to see the setpoint and wfg.	
12 May 60 11220 12134 1							in snapshot I cannot say for sure if it was a p.s. problem. I recovered bo10-tq4-ps and ran it to+10amps and -10amps. It seems to be ok for now. Don Bruno [rhic	Quench (Unexplained
2. Shand 1 10 20 20 st 1 and 1 5 10 st 1 5 10	19-May-06	23:28:39	bol0-tq4		10A			tq Trip)
2.26							18:30:00 power supply tripped off at the time of the beam abort. D. Bruno has been contacted. 18:50:00 D. Bruno instructs CAS to swap out the power supply.	
2.26							20:30:00 CAS is finished. Ramping RHIC back to Injection, then cycling RHIC through a bystensis ramp. Replaced the supply with vin 057. 22:00:00 Physics	
2.26							Running. (CAS Notes: Don, The 25 pin D connector seemed tight, and all hardware was there. Maybe we cleared something Friday when we cycled power	Local, No PS
Shando 11:20:20 string 14 16 Name Stoog Obstack, White 15 Stop open parts on your but very face to time. In addition, the string of the string	22-May-06	18:27:01	ys10-sq4	49	10A	MCR	FORCE SUPPLY WAS OPERATED AS TO SUPPLY WHEN IT ARREST OF PICTURE. THAT IS	/ Illegal State
Sharing 110000 paringle dp dp dp dp dp dp dp d	2-Jun-06	11:22:26	yi7-tq6	54	88	Alarm Screen	Nolan, J Wilke	AC Phase
Sharing 110000 paringle dp dp dp dp dp dp dp d							11:16 Huge spikes in yellow beam decay with very fast rise times. Instabilities due to beam-beam beating up vellow? The blue intensity is about 0.5e11/b.	
Sharing 110000 paringle dp dp dp dp dp dp dp d							yellow is down to 0.15e11/bvhs 12:08 Tom Nolan is swapping out the current regulator card for vo4-to4 now, which should only take about 5 minutes, -ini, vhs	
Sharing 110000 paringle dp dp dp dp dp dp dp d							12:49 Tom Nolan and Grogg Hoppner swapped out the Current Regulator card of yo4-to4-ps because the card looked like it had problems with the setpoint relays.	
See							MCR had problems recovering this yo4-sq4-ps because TAPE did not work. I will speak to someone in controls about the TAPE problem. Don Brano [rhic]	I-Reg Card/
See	9-Jun-06	11:09:50	yo4-144		48	MCR	[ps] Tech Report, Jim found a cracked land connecting to the Relay. complain about movement in the beam. Further Analysis indicated that a	cracked land
See	20-Jun-06	18:00:00	vo8-ef2	13	88	Switch Over	problem may be within the MADC Readbacks so the Buffer Card was swapped out. DB, MD, GPH	Buffer Card
Section 10 (1) (1) (1) (1) (1) (1) (1) (1) (1) (1)							qd2 showed a FET fault. Joe Doud swapped out the controller card for this	
Section 10 (1) (1) (1) (1) (1) (1) (1) (1) (1) (1)							supply. George and I helped recover the rest of the correctors as well. Joe Droad helped clear up ATR line ps problems such as remote I/O faults, a false watermat	
and in the 2-DA and I tolde of 1, in committy pathing quants honoring and the grade of the 1 DA and I tolde of 1, in committy pathing quants honoring and the grade of 1 DA and 2 DA an	24-Jun-06	12:30:00	yi7-qd2		12A	Power Dip	leak and he reset Circuit Breaker trip faults and he turned on the ATR p.s.'sDon Bruno [rhic] [ps]	FET Fault
and in the 2-DA and I tolde of 1, in committy pathing quants honoring and the grade of the 1 DA and I tolde of 1, in committy pathing quants honoring and the grade of 1 DA and 2 DA an							Jun-25-2006 00:32 yo8-qf2-ps tripped the link on an AC phase fault. I tried to turn the n.s. on by itself and the first time I turned it on it did trip on an ac phase	
and in the 2-DA and I tolde of 1, in committy pathing quants honoring and the grade of the 1 DA and I tolde of 1, in committy pathing quants honoring and the grade of 1 DA and 2 DA an							fault but then I tried it another 4 or 5 times and it did not trip on an ac phase fault. I ran it up to 10A each time and it looked ok. I also put it in the OFF state	
and in the 2-DA and I tolde of 1, in committy pathing quants honoring and the grade of the 1 DA and I tolde of 1, in committy pathing quants honoring and the grade of 1 DA and 2 DA an							for a few minutes. I have asked CAS to replace the controller card and check that the ac connections are tight on the rear of the p.sDon Bruno [thic] [ps] Jun-25-	
As a process of the contract o							2006 01:08 CAS (Tim and Charles) checked the ac connections but did not find anything loose. They also replaced the control card. I turned yo8-qf2-ps on again	
As a process of the contract o							and ran it to 25A and it looks ok. I am running yellow quench recovery and then will let MCR do a bysteresis ramp. Don Brano [thic] [px] Jun-25-2006 01:44	
the ac plane fault comes up each time. It yo to mat ion. I asked them to check the ac connections and swap on the control call. If the does at work they will have to swap out the whole, pc One Remark [14] [26]. In 2015 10 11 12 Cell must roop up to the left became checking the ac least - 5 of the 11 12 Cell must roop up to the left became checking the ac-	24-Jun-06	23:33:46	yo8-qf2		88	PR-080		AC Phase
be commencioned and septor on the commencion of Florid does not work they will have been been been been been been been be							the ac phase fault comes up each time I try to turn it on. I asked them to check the	
Bac-55-200 11.2 CAS must roup out 84-5q because clocking fac x-connections and recognition contact and are a plane in lay power, and the connections are recognition contact and are a plane in lay power, both from 1 fact plane 1 fact 1 f							ac connections and swap out the control card. If that does not work they will have to swap out the whole p.sDon Bruno [rhic] [ps]	
							am-25-2000 11:32 CAS must swap out bif-tq4 because checking the ac- connections and swapping the control card did not make the ac-phase fault go	
25-Jun-06 [10:28:27] ht6-tq4 60 88 N.L. Replaced with six 006. AC Phase			l I				awayDon Bruno [rhic] [ps] Jan-25-2006 12-47 bi8-ap4-ps has been swapped outDon Bruno [rhic] [ps]	
	25-Jun-06	10:28:27	bi8-tq4	60	88	N/L	нерысов with ки оЖ.	AC Phase

this Boundale and Completed by Groups 7: Suppass

Date	Time	I-dent	S/N	Loc.	QLI Ref:	Analysis of all 50 and 60 amp Correctors	Fault ID
						Official Hand Off of the Blue Ring to MCR for Run 6, Machine Setup 22:00 G. Ganetis reports that Power Supply work is done for tonight. A successful ramp of the magnets has been performed. The RHIC magnets have been left at park.	
6-Feb-06	22:00:00	Blue Ring		<u> </u>		2006-Feb-11 23:00:00 George is done for the night, and has given us the green light. –JLN Yellow ring is	
11-Feb-06	23:00:00	Yellow Ring				ready for operation.	
						22:00 yo5-tv15 is off on an error signalattempting to resetJPJ, 22:16 The supply trips each time it is	
18-Feb-06	21:57:58	yo5-tv15	24	5B	MCR	jumed on with a left error, which seems to slowly climb from zero. Looks like we'll need a tunnel access twaps it out. 1912, 22:10 Scyling it to fif or a while didn't seem to lear the problem, hough I may not have waited long enough. While I'm trying this again, Don is looking at the snapshot data from homePl 22:30 sex's-15 posts supply seeds to be swapped. We'll Ec. CAS do that while we're ramping rotatorsCAI, VP, Waldo 22:47 I tried to turn on the p.s. because I wanted to try and figure out if it could be a loos connection at the load and the problem. When it is swapped out we should have a better cliedDon Brunto (first) pp. 22:50 T tunnel access to replace ye's-15 is underway. The RFIC Cap complete. Support is swaling in the tunnel while we not at a 1.4 for 5 minutes as a testIPP 23:43 The access is complete. Support is swaling in the tunnel while we not at a 1.4 for 5 minutes as a testIPP 23:43 The access is complete. Support support should be a some standard of the standard standard should be a some standard to the standard standard should be a some standard standard should be a some standard standard should be a some standa	off/error
26-Feb-06	Several	bi1-tv4		1C		maintenacne day.	On-Error
1-Mar-06	maint	bi1-tv4		1C		Tech report: Team found tapping movement of the Node Card Cable would make the fault come and go. They replaced the cable and retested but could not regenerate the fault. Problem solved. BK and RFK	Node Card Cable
16-Mar-06	11:26:11	yo8-tv9	436	9A	MCR	Supply tripped on and Over Voltage, MCR was in the middle of a store so they elected to wait for assistant Don got the call the second time it alarmed after they had turned it back on and it tripped on Error (13:18:51). Tech Team dispatched at 13:35:00. Checked external Magnet connections and they were good Replaced pix with via 33: B kt and RFs.	Over Voltage
5-Apr-06	1:48:13	yo9-tv7	328	9C	MCR	Snapshot indicated that this supply first failed at 1:48:13 on an Over Temp / Over Voltage whereas the Voltage were first from 171.864mV and suddenly dropped to -217.132mV eventually dropped to -127.237mV then to 100MV. Ind and Current seen opening at 1.33 same, the feer feventually Segan to climb of the control of the	
						While reviewing Snapshot for problems, noticed this supply had tripped to the off state whereas yo4-tv17- ps rails to the maximum output of 50 amps even though the wfg tells it to stay at zero. This p.s. tripped to	
1-May-06	7:33:23	yo4-tv17			Snapshot	the Off state and that is why the the signals all look like they go to maximum values. This could be a p.s. problem or looses ac connections at the p.sDon Bruno [rhic] [ps]	IrefCurrentRang eError (Off)
						Iter Rails to the Maximum in the Positive Direction while the Current Rails Maximum in the Negative Direction. MCR Resets according to the Alarm Log at 01:40:39. This p.s. tripped to the Off state and that is why the the signals all look like they go to maximum values. This could be a p.s. problem or looses ac	
2-May-06 3-May-06	1:34:15 8:30:00	yo5-tv17 yo4-tv17	11	5B	MCR MCR	connections at the p.sDon Bruno [rhic] [ps] Tech report: Team found Inner Cooling Fan had failed. Replaced p/s with s/n 415. BK and RFK	Off Cooling Fan
3-May-06	8:30:00	yo5-tv17		5B	MCR	Tech report: Team found loose AC Connection at the rear of the power supply. Din rail appeared to be tight. BK and RFK	
						2006-May-06 03:24:00 Power supply bi8-dod2 tripped on an overtemp fault while running with a zero setpoint. Since the fault cannot be cleared, we will leave it off for now. p^ source conditioning has been	
6-May-06	2:39:53	bi8-dod2	569	9A	MCR	completed.	Over Temp
10-May-06	maint	bi8-dod2	569	9A		Maintenance Day, Power Supply was swapped out andreplaced with s'n 634. BK and RFK 2006-May-11 04:00:00 yi3-dh5 trips on iref range error if the setpoint ramps below -1A. Greg has applied -2.6mm 3 bump at s=3110m to avoid the problem for now. May-11-2006, Recieved the call from Don to enter Ring, Keys recieved at 08:50 and completed job at 10:25 (RF Area Access) Corrector Power Supply	
11-May-06	3:54:09	yi3-th5	185	3C	MCR	yi3-th5 was replaced and testedB. Karpin, G. Heppner [rhic] [ps] Physics is off, a fairly severe power dip appears to have occurred. Multiple resets required, J. Drozd was	Error Reset Node
29-May-06	8:55:42	Node Card		9A	N/L	called in to assist CAS where he had to reset a node card in alcove 9a.	Card 9A-R4
3-Jun-06	3:48:04	Node Card		7A	N/L	11-28-49 D. Bruno was contacted about the Reset Node Card adarms that came in overnight. 11-15-52 D. Bruno indicates that a brief access into the ring is needed to reset the cord body, or to swap out the cord unity. The card swap will require the supplies to be ramped zo oze. Experimentar at 100 are going to take advantage of the access time as well. 12:25-90 C.S. was able to reset the node card locally. All power supplies are beach on Experimentar at 1000 are point of the cord of the D. Reset Reset and the D. Reset	Reset Node Card 7A-R4
						Eleven corrector power supplies in the yellow ring tripped at -1015 to the off state (no faults) for no apparent reason. The supplies are all located on cfe-7a-ps2. We leave the supplies off for now at the reque of K. Brown to avoid the risk of disrupting beam operationsLH	Reset Node Card 7A-R6
14-Jun-06	10:14:26	Node Card		7A	N/L	There is a "Local, Reset Node Card" yi6-tv14, th13, tv12, th11, tv10, th9, tv8, th7, tv6, th5 and tv4. Alcove 7A, cfe-7a-ps2, Rack #6. Don called MCR and it cleared by itself. No action taken. G. Heppner	(Cleared by Itself)
						At 21:12:26, Node Card 7A-R6 in Alcove 7A tripped all the supplies in that rack (11 in total) with a "Loct Reset Node Card" Alarm. Don Bruno was notified and contacted CAS with the proper procedures for replacing this chassis.	
14-Jun-06	21:12:26	Node Card		7A	N/I	2006-Jun-14 23:35:00 CAS is entering gate 6GE3 to repair the node card in the 7a alcove. 2006-Jun-15 00:15:00 The repair of the node card in 7a is complete, the power supplies are all on and tested as ner D. Bruno's instructions, (Node Card Chassis Replaced)	Reset Node Card 7A-R6
							Reset Node
23-Jun-06	5:56:57	Node Card		11A	N/L	Power Dip, Node Card Chassis required Manual Reset.	Card 11A-R2 Reset Node
23-Jun-06	5:56:57	Node Card		1C	N/L	Power Dip, Node Card Chassis required Manual Reset.	Card 1C-R2

Data Rosanthal and Compiled by Guogray 9. Heppon

Date	Time	I-dent	S/N	Loc.	QLI Ref:	Analysis of Timing Resolvers	Fault ID
						Official Hand Off of the Blue Ring to MCR for Run 6, Machine Setup 22:00 G. Ganetis reports that Power Supply work is done for tonight. A successful ramp of the magnets has been performed. The RHIC magnets have been left at park.	
6-Feb-06	22:00:00	Blue Ring					
						2006-Feb-11 23:00:00 George is done for the night, and has given us the green light. –JLN	
11-Feb-06	23:00:00	Yellow Ring				Yellow ring is ready for operation.	